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The History of Civilization

Language

A Linguistic Introduction to History

The History of Civilization

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Language

A Linguistic Introduction to History

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FOREWORD

LANGUAGE AND MENTAL EQUIPMENT

In the Foreword to Prehistoric Man, *we said : " The* hand *and* language : *in these two is comprised humanity. We feel that these things should be given the premier place in this work—the things that mark the close of zoological, and the beginning of human history : one, if we may so put it, is the invention of the hand, and the other is the invention of language. In these two lies the decisive progress in practical logic and in mental logic that characterizes mankind."*[1]

It will be recalled that the fundamental thesis with which we started is that history is an essentially logical process, whose deeper significance is to be sought in the tendency of the living being to act in conformity with its nature and to amplify and develop it. Our thesis, however, is to be considered here only as a control hypothesis, which first receives complete expression through the recognition and the study of those other factors which play a rôle in history and make history what it really is :—a complicated and incongruous network of facts in which a purely intellectual or superficial observer may perhaps see only a mass of fortuitous events.

The preceding volume indicated the importance of the practical application of logical reasoning. It pointed out how the hand had become an instrument of incomparable value, rendering possible all the material equipment of life, and both expressing and accelerating our psychical evolution. The individual is the true initiator of progress, to which his environment can only lend stimulus and fixity of character.

Language, in a different order, is one of the most extraordinary creations that has developed in the course of human evolution ; it deserves to arrest our attention and hold it for a while. What exactly is its rôle ? What part has it played in mental development ? What are the relations between the individual and society that have led to the production and perfection of so wonderful an

[1] *p. vi.*

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instrument? These are the questions which the present volume must answer.

Our plan might have been realized in various ways. Had the present book been the work merely of a psychologist or an historian, simply a manifestation of curiosity in linguistics, its relation to the general course and the problems of "L'Évolution de l'Humanité" would perhaps have been more direct, and also more apparent. But it is the work of a philologist, writing from a definite standpoint; a man who sticks close to facts and will have no traffic with theories. He has taken occasion to proclaim this [1] *attitude before, and in this book he does so again.*

What he has given, and what he specifically desired to give us, was a technical study of that complex and supple instrument we call language, viewed in all the diversity of its forms and its historical transformations. With this study, the problems which language raises for historical synthesis are necessarily linked, although they are not treated explicitly and for their own sakes. M. Vendryes will not permit himself to be other than a philologist pure and simple.

It seemed to us that in the collaboration of this specialist, with his particularly broad outlook, we should secure an additional warrant for the science of history as we understand it. The experiment inaugurated by the publication of the present series may prove more successful under such conditions than if we had chosen as our collaborator a thinker with a bias in favour of our own theories.

From the point of view of synthesis, however, we must discuss to some extent the general ideas underlying M. Vendryes' excellent book.

What M. Vendryes wished to demonstrate, and what he has succeeded in demonstrating, in a forceful manner, with an admirable abundance of proofs, is that language is a natural outcome of life, and how life, having produced it, continues to "nourish" it.

The older conception of language as something either miraculously given to man or artificially created by him, has left traces on a certain school of linguistic thought which regards language as

[1] Bulletin de la Société francaise de Philosophie, *Feb.*, 1912, *pp.* 69–71.

something independent and transcendent, and attributes an inner necessity to its laws : not only to phonetic laws or those of pronunciation, connected with the speech organs, but to the morphological laws bearing upon grammar, and the semantic laws relating to vocabulary, although " it is quite wrong to think of language as an ideal entity, evolving independently of men and pursuing its own ends." [1] The truth is, language is closely connected with our psychic life, and from the beginning it is only psychology in action.

M. Vendryes declares the problem of the origin of language to be outside the sphere of philology, and he contents himself with advancing only most cautious suggestions on this subject. The problem is indeed a psychological one, and it is no more possible to give an historical *account of the origin of language than of the origin of the hand. In fact, we cannot properly speak of origins in this case at all, because language was not something ready made in which an act of creation was involved, but is a series of modifications for human needs, of a phenomenon which occurred among the animals. Language in the strictly limited sense of the word, that is, auditory language—which is only a specialized form of the faculty of producing signs—exists among animals,[2] which express their effective states by sounds, and it is unquestionably from the cries into which these emotions have been spontaneously translated that language has sprung. Perhaps, as has been suggested,[3] the calmer sensations and more temperate feelings produced articulate sounds, while the cry corresponded to violent emotions. But language must have been primarily affective, and in large measure it remains affective, in close relation to the individual and individual contingencies. This, M. Vendryes has incontestably established in his penetrating and brilliant study. He shows the initial stages of affective language in the cries of the child ; and then proceeds to demonstrate in the spoken language the existence of the spontaneity that always " surrounds and colours " every expression of thought, and renders grammar unstable.*[4]

[1] *Vendryes, p.* 360. *Cf. Couturat,* Bull. de la Soc. fr. de Phil., *Feb.* 1912, *p.* 54 ; *May,* 1913, *p.* 140.

[2] *Ribot,* L'évolution des idées générales, *p.* 66.

[3] *Cornejo,* Sociologie générale, *vol. i, pp.* 24–5.

[4] *Cf. pp.* 138, 145, 147–8, 153. *On the establishment of language and the rôle of sentiments before the intellectual stage, cf. some interesting remarks made by August Comte. Cf. also Aug. Georges,* Essai sur le système psychologique d'A. Comte, *p.* 52.

At an early period, side by side with affective language, "active" language must have arisen, as soon as the cry ceased to be the mere translation of an emotional state and became a means of action, appeal, supplication, or command.[1] *This was an important phase in the history of language; and the need of self-preservation, maintaining life, of gaining a fuller life by co-operation with, or utilization of, others, has here played the principal part. "The living being must ever be concerned with preserving his own life, protecting it against dangerous influences, and extending his power over other living creatures around him." Pierre Janet, who in his psychological work has thrown so much light upon this type of action, which we might call* effectiveness, *considers language an effective form of activity; and he regards "the behaviour of the man speaking and the man spoken to . . . as having sprung from attitudes of command and obedience that already existed in the animal."* [2] *Speech and mimicry were at first closely associated, but auditory language triumphed on account of its practical superiority; and just as external speech led to outward activity, so did inner language express itself in the will, and manifest itself in belief and desire. It became increasingly immanent in all human activity.*

The final step in the development of real human language occurred when the sound was recognized as a sign, when the spontaneous act which created the useful sign was generally completed by the will which adopted it. This progress, originally of an entirely practical nature and directly serving the purposes of life, was capable of unlimited psychic enrichment.[3] *Unquestionably, in order that sound could be dissociated from the reflex action with which it was originally connected, the memory must have been already developed, and in order that the relation of the sign to the thing signified might be established (for things in themselves* signified *nothing) consciousness must have become fully awake. But consciousness had increased notably, and particularly in strength and flexibility, when it could make use of symbols that fixed the images representing objects. The use of the symbol enabled man to attain the concept more easily, inasmuch as he*

[1] *Cf. Cornejo, ibid., p.* 23.

[2] *Cf. Janet, "La Tension psychologique, ses degrés, ses oscillations" published in the* British Journal of Psychology, *Oct.*, 1920–*Jan.*, 1921. *Ribot, ibid., p.* 62.

[3] *For the definite limitation of concepts associated with the movements of the hand, cf. H. Wallon, "La conscience et la conscience du moi," in the* Journal de Psychologie, *Jan.*, 1921, *p.* 61.

could make it even more independent of direct perception by transmitting it to another brain. Nascent intelligence gradually made language a special instrument, the organ of thought, permitting thought to be exercised without having any immediate relation to the function of the real.[1] *Words, by their representative and communicable value, possess the same practical utility as paper currency, but they are equally dangerous in so far as they may have no real counterparts, and can thus become a* flatus vocis, *purely imaginary entities.*[2]

Language, which is born of life, necessity, and desire, develops primarily through synthesis. M. Vendryes shows that thought, a stranger to grammatical classification, begins by being poured in its molten state into language. The verbal image or the phonetic word, just because language is originally an action, possesses the value of a sentence ; nouns, representing objects and their properties, verbs, representing states, and grammatical auxiliaries, indicating relations, are all derived from them. The sentence precedes the grammatical word, and the word precedes the syllable.

Language thus remains subordinated to life " with all its infinite development ". Nothing is more interesting than to observe, with M. Vendryes, the variety and often the clumsiness of the methods used to translate the connexions which one perceives in the world of reality—the extreme instability of a vocabulary, the tendency of language to continual diversification and unlimited growth among the human beings who use it to express the more personal aspect of their own life. Written language—even that of the great writers, which might well have some claim to set a fixed standard for this instrument, by reason of the perfection it gives—cannot arrest " the indomitable force of life triumphing over rule, and breaking the fetters of tradition." [3] *Whatever some may arguc, assuredly words do not live ; it is the mind that lives and changes their meaning, just as it is the intellectual life that changes and renews the names of things. " Hence, it is not altogether unreasonable, after all, to claim that there are as many languages as there are individuals."* [4]

[1] *An expression of Janet's. Cf. a curious note by L. Dupuis, in the* Journal de Psychologie, *June*, 1921, " *La mémoire des noms propres et la fonction du réel.*"

[2] *Cf. Ribot, ibid. p.* 125. *Cf. also p.* xii.

[3] *p.* 275.

[4] *Cf. pp.* 233–5.

M. Vendryes, therefore, lays special stress on the contingent character of language. But his knowledge of his subject is too complete, and his sense of reality too strong, not to induce him to place himself at another angle whence another point of view is visible. There are as many varieties in language as there are speakers. For all that, there are languages*—standard or common languages, special languages—and there is* language. *"The tendency towards unification is always at work against the tendency towards differentiation, and equilibrium is re-established."*[1] *Linguistics, therefore, discloses uniformities varying from the "general" to the special.*

These uniformities M. Vendryes considers as being essentially the work of society. If he mistrusts theories and deals warily in his book with the part played by generalization, we feel that he lays great stress upon sociology, a certain type of sociology whose merits we have ourselves weighed and discussed,[2] *and that he is inclined to let the term "social" satisfy that need for explanation which manifests itself in him from time to time in a more or less restrained form. In this emphasis upon the social he is in agreement, moreover, with certain other linguists—among them a very eminent scholar—who, without positively belonging to the school of Durkheim, nevertheless felt the seduction of that powerful and subtle mind.*[3]

If "it is a truism to-day to state that man is primarily a social animal",[4] *it is nevertheless still necessary to define what it is that gives him this essential character, and to distinguish in him the truly* social *element from the* human. *These elements M. Vendryes does not attempt to differentiate.*[5] *We find, even in his work, however, the accuracy and reserve that are characteristic of his sociology; so much more definite and sure is to him the appeal of direct experience of linguistic facts than any hankering after theory.*

Our own view, withal, is that the following distinction claims attention before all else.

[1] *p.* 244.

[2] *Cf.* La Synthèse en Histoire, *pp.* 124–7.

[3] *Beginning with Vol. V* (1902), *M. Meillet has been in charge of the section on language in* L'Année Sociologique.

[4] *p.* 239.

[5] *Just as, in the posthumous work of F. de Saussure,* Cours de linguistique générale, *"the social forces," the "collective psychology", and the "historic factors" upon which language depends are not clearly distinguished. Cf. especially pp.* 107, 110, 115.

Society, qua *society, has a life of its own which embraces, surpasses, and enriches the life of the individual; its specific needs manifest themselves in* necessary institutions, *where individuals find solidarity in differentiation. A collective entity, a nation, has a* character *of its own which bestows upon individuals* contingent *resemblances.*[1]

The character of a nation—much more so the particular features of the more or less durable secondary groupings within it—reflecting itself in the standard language, and in the dialects and special languages, introduces contingencies of all sorts which have nothing to do with the "social organism" or "social division". It has even been said that the spiritual "patrie" of the mind is in language. But the patrie *is a very different thing from* society.

M. Vendryes, who justly criticizes the introduction into linguistics of the concept of race, also objects to the notion of an ethnic mentality. He was obliged to recognize, however, that there is some relation between the mentality of a people and their language.[2] *"We can imagine a psychology of peoples based upon the examination of divers semantic changes attested in the languages they speak. This study would call for considerable subtlety of mind, but it would be worth while attempting."* [3]

There are, indeed, abstract and concrete languages which correspond to contrasting ethnic mentalities. Nothing is more striking in this connexion than the notes of M. Granet on "Some Peculiarities of Chinese Thought and Language", published in the Revue philosophique.[4] *He shows that "the study of Chinese vocabulary indicates the extraordinarily concrete nature of Chinese concepts". "Almost all the words connote singular ideas, representing apperceptions which are as highly specialized as they can possibly be, and what this vocabulary expresses is not the needs of a mentality that classifies, abstracts, and generalizes, and which aims at working upon clear-cut, distinct facts, prepared for logical organization: it shows, on the contrary, just the opposite tendency, the dominant desire for specification, particularization, the picturesque . . . As they appear to us and as the Chinese explain them, the words of their vocabulary seem to correspond to conceptual*

[1] *On this form of contingency cf.* La Synthèse en Histoire, *pp.* 69 *ff.*
[2] *p.* 238.
[3] *p.* 209.
[4] *Jan.-Feb., and Mar.-April,* 1920.

images . . . united, on the one hand, to sounds that appear to be endowed with the power of evoking the characteristic details of an image, and, on the other hand, to signs that represent the gesture which is noted by the motor memory as essential." [1]

This factor of ethnic psychology is not the only contingency of general application conditioning language. "Linguistic evolution is directly dependent upon historical *circumstances."* [2] *It depends upon habitat, the kind of life led, and the manner in which the lives of different nations are interwoven.*[3] *But as we have just seen, the features which affect a group or an entire nation are not necessarily social in origin. The term "historic" is here both apt and correct.*

Among those influences which it registers like some sensitive instrument, vocabulary is affected by social facts, properly so called. M. Meillet has brilliantly demonstrated this point: "The principle involved in the majority of changes of meaning is to be sought in the division of the speakers into various social groups, and in the passage of the words from one social group to another." [4] *But in the measure in which it* reflects, *like historical conditions, the "social conditions" of the life of the people, can language truly be called social? We do not think so.*

Language is truly social, according to our view, only when it is a creation of society, an institution inherent in society. "It is in the bosom of society," M. Vendryes states definitely, "that language is formed . . . Language is thus the social fact par excellence, *the result of social contact".*[5] *There lies the fundamental problem; what is the rôle of society as such, in the creation and development of language?*

With respect to the formation of language M. Vendryes has recognized that a psychological operation is involved from the outset; that two human beings are capable of creating a language only because they are potentially prepared to do so, and that, furthermore, language sends its roots "deep into the consciousness of each one of us; thence it is", he says, "that it draws the

[1] *Ibid., pp.* 104, 114.
[2] *p.* 353.
[3] *pp.* 335, 287. *Cf. Cornejo,* Sociologie générale, p. 66.
[4] Année Sociologique, *xi, p.* 791; *and on this point see also ibid., v, p.* 600; *vii, p.* 676; *viii, p.* 643; *ix, pp.* 15 *ff.*; *xii, p.* 850.
[5] *p.* 11.

sustenance enabling it to blossom in speech." [1] *If, therefore, in stressing the action of society, as he has done in many passages, he merely wishes to point out what resources social organization might find in this means of communication between men, and how the "adaptation" of the human faculties to social needs* [2] *has brought about the progress of society and language at the same time, we can but agree with him.*

Society has indeed utilized language. It has exercised—we will not say constraint, [3] *but pressure, in order to perfect it and make it practical. It has even in various ways* institutionalized *it; for we must draw a distinction between fundamental and secondary institutions.* [4] *Language, in our opinion, however, was originally a factor rather than a product of society. With the hand, language has been responsible for the scope of society. Association is the closer as differentiation increases, and differentiation itself owes as much to language as to the hand.*

M. Vendryes, however, does not limit the rôle of society to a stimulating action. After saying that "language does not exist apart from the people who think and speak it; its roots go deep into the consciousness of each one of us"; he adds "but personal consciousness is only one of the elements of the collective consciousness whose laws are imposed upon every individual." [5] *As an instrument of thought and an intellectual organ, language, according to numerous passages in his book, is a real social creation. "Émile Durkheim attributed the existence of categories to a sort of necessity which is to intellectual life what moral obligation is to the will, that is to say, categories are of social origin, and dependent upon society."* [6] *M. Vendryes accepts this idea of the Durkheim school, as illustrated by M. Lévy-Bruhl in his book* Les Fonctions mentales dans les sociétés inférieures.

This brings us to the very heart of a question which possesses a paramount importance in history; namely, the part played by society in building up logic.

[1] *Cf. pp.* 1, 7, 11, 14, 360.

[2] *Cf., for example, in* L'Année Sociologique, *M. Mauss, iv, p.* 141 (*language "is obligatory for all the members of a given society, and exists, so to speak, outside individuals"*); *A. Meillet, ix, p.* 2 ("*the characters of exteriority to the individual and that of coercion, by means of which M. Durkheim defines the social fact, appeared . . . definitely proven by language*").

[3] *p.* 14.

[4] *Cf.* La Synthèse en Histoire, *p.* 133.

[5] *p.* 360.

[6] *p.* 113.

We believe, for our part, that thought continues life; that practical thought, more or less conscious, precedes theoretical thought; that language, which aids practical thought, and which alone permits the progress of theoretic thought, thoroughly expresses human nature. It is man as such who is the creator of intellectual as well as practical logic. In classifying objects and their mutual relations, it is he himself who is interpreted by thought and language—both intimately connected. It cannot be society that creates the logical categories; society has needs but it does not think. *If there are in language uniformities of a different import from those due to transmission, individual circumstances and imitation, their cause lies in the initial identity of the representative life among all human beings.*[1]

In the Foreword to Vol. II of this series we spoke of the hand's contribution to the development of the psychic life. To this ever-increasing "intelligent" use of the hand, there is a corresponding progress in psychic synthesis and inner clarification.[2]

Not only has the hand facilitated the co-operation of human beings by its functional differentiation, but it has also contributed enormously to our knowledge of the external world. For knowledge of an entirely practical nature, and founded upon interest *and resulting from tendency, is contemporaneous with life. Adaptation is knowledge. There is a knowledge of reality that finds its material expression in every organism, a kind of mechanics and physics in action, in the exercise of muscular energies. "Before it had been actually conceived, the law of causality was* felt *more and more through the unfolding of human activity in a world dominated by this law, of which man is an integral part."*

But thought *and the higher forms of psychic activity are bound up with language. Among the Greeks, as Cournot observed, the same word* λόγος *expressed both language and reason. Language is a double-edged implement; an instrument for communication and for registration which, through abstraction and generalization, fixes knowledge within concepts, and then permits an indefinite development.*

Not that the faculty of abstraction and generalization is awakened by means of language alone. Attention and memory play their

[1] *Cf. the interesting reflections of D. Parodi in the* Bull. de la Soc. fr. de Phil., *Feb.-Mar.*, 1914, *pp.* 90–91.
[2] *Cf. pp.* i–x.

rôle apart from language—under the influence of tendency. Homo alalus, *like the animals, derived his perceptions from indefinable and confused sensations. These perceptions are the result of selection; of all sensations "those with the greater practical interest are greatly favoured,"* [1] *and attract* attention. *Memory, moreover, enriches the impressions which it has received from representations drawn from former experiences. In this way certain salient features become detached from objects, features common to a group of objects.*[2] *Within this early representative life, individual and subordinated to interest, generic images are formed, a complete, practical equipment like the material equipment whose tendency it is to appropriate the objects for consciousness, and to dominate them; and this is the humble germ of theoretical knowledge.*

Language, at first emotional and active, and then synthetic, according as it is differentiated in order to distinguish objects, properties, and states, rendered more supple in order to give expression to the most varied relations of reality by means of words, devoid of their particular meaning, which, however, take on an abstract and general value as grammatical tools, gradually develops an unheard-of power and constitutes in function *the faculty of discriminating between like and unlike, through abstraction and generalization, and this faculty is as immanent in life as are feelings of pleasure and pain. Language thus enables us to secure "a more penetrating and extended grasp upon things".*

It is because man is homo faber, *but even more because he is* homo loquens, *that he is* Homo Sapiens. *It seems as if the development of language had closely followed that of the human artefacts. According to Boule* Homo Heidelbergensis *was probably intermediate between human beings who speak, and animals who utter cries:* Homo Neanderthalensis *unquestionably possessed already the faint rudiments of articulate speech.*[3]

That the transition from the generic image to the pure concept was exceedingly gradual goes without saying. The word at first played but a "sorry rôle". As an abstract symbol it raised itself

[1] *Ebbinghaus,* Précis de Psychologie, p. 159. *Cf. Ribot, ibid., p.* 9.

[2] *In the most recent psychology of attention we find emphasized the rôle played by schemes, or impoverished images possessing an entirely individual character, and which are of "non-social origin". Cf. Revault d'Allonnes, "Les formes supérieures de l'attention" in the* Journal de Psychologie, *p.* 232.

[3] *Boule,* Les Hommes fossiles, *pp.* 154, 237.

to a sufficient degree of abstraction to subsume characteristics that were the most difficult to recognize, and of the most general type. It gave fixity to the ideas most rich in "potential knowledge" —number, space, time, cause, law, species. "The word passed from nothingness to complete autocracy; the concrete from the fullness of being to nothingness." [1]

And it also goes without saying that society has played a decisive rôle here, too—although an indirect one. The word rendered the concept communicable from one brain to another; society favoured and quickened the contribution of meanings, intellectual "capitalization". But this logical co-operation, although it took place within society, is not for that reason necessarily a social phenomenon. It should be remembered, on the contrary, that the word, by placing the individual understanding at the service of society, enabled the latter to obtain a more clear-cut consciousness of its specific needs, and to develop rationally.

The aptitude for abstraction and generalization, which is proper to man alone, and develops with the reasoning process, is unequal among men. Inventors, for instance, are those people who are "born with a talent or genius for abstraction", [2] *and this aptitude for abstraction, at first purely practical, in the case of inventors, becomes more and more theoretical by reason of accumulated resources, and by the spontaneous exercise and play of intellectual faculties. At the same time, the initial need, the human* interest *or concern in the practical aspect, does not disappear. What we would stress is that not only is there a practical activity which persists and which at certain moments even acquires an incomparable importance and force,* [3] *but that the most speculative type of activity is ultimately directed, at bottom—according to our postulate—to one hidden end and final purpose, the conquest of things and the liberation of the spirit, towards the apotheosis of humanity. Science is a "vital instrument" even under its apparently least "efficient" form, and, indeed, especially under this form. "If man triumphs daily over nature, whereas animals have to go on fighting the same unequal battle without a decision, it is because man is able to look upon the world objectively. The animal's too practical intelligence has made him the slave of his perceptions, which almost always produce the same automatic*

[1] *Ribot, ibid., pp.* 100, 116, 148.
[2] *Ribot, ibid., p.* 246.
[3] *Cf. L. Weber,* Le rythme du progrès.

reactions." The most disinterested search for truth is the most intelligent pursuit of interest.[1]

The last volumes in this series will indicate the rôle that writing and printing have played in the investigation of truth—both of which, like language, represent the sum of innumerable inventions, imitated, transmitted, and socialized. Writing created speaking objects. *Printing multiplied them and made them permanent. Space, time, and death were conquered by thought.*[2]

Often, it is true, speculative thought has fallen into the chimerical, into aberration. Thought then moves within the " uncreated world of the age of primitive man ", the world of ideas—which is, at the same time, the world of words. And the word, with all its advantages, also possesses certain disadvantages. Since, in principle, it is derived from things, and represents things,[3] *man has naturally come to think that some reality corresponds to every word, and from this has arisen the belief in idols and in entities that have been endowed with reality. As certain words produce definite effects, it was natural to believe that every word possessed that virtue. " The man who calls to his companion at a distance, and sees him run towards him in response to his call, has let loose a force very different from the material force produced by a missile or projectile." There is certainly some truth in this idea of Weber's—that speech has contributed toward the production of the notion of an efficient cause which is quite distinct from that we owe to the exercise of various kinds of material technique.*

The type of mentality that makes arbitrary use of words has been called " prelogical " and it has been described as entirely social in origin.[4] *However, it seems to us in reality to be derived from the affective life of the individual ; but it is maintained and developed by the social life which is originally in large measure affective, and which, by reinforcing the emotional states of the individual, creates a kind of mystical environment, closed more*

[1] *Cf. D. Roustan, " La Science comme instrument vital," in* Revue de Mét. et de Mor., *Sept.*, 1914, *pp.* 612–43.

[2] *Cf. Cournot,* Essai sur le fondement de nos connaissances, *p.* 317 ; *Lacombe,* L'histoire considérée comme science, *pp.* 197 *ff.* ; *de Majewski,* La Science de la civilisation, *p.* 242.

[3] *It even seems to retain a little of the reality of the thing : whence certain magical practices. Cf. Weber, ibid., p.* 92 ; *also* Bull. de la Soc. fr. de Philosophie, *pp.* 74–5 ; *Ribot, ibid., p.* 108.

[4] *Cf. Lévy-Bruhl, op. cit. ; Vendryes, pp.* 99, 316–18. *Granet, articles cited Mar.-April,* 1920, *p.* 187 ; La Synthèse en Histoire, *pp.* 195 *ff.*

or less to experience. It is in society that classifications become consolidated—not so much prelogical *as foreign to logic—and that a "verbal technique" develops parallel to material technique. Social authority, when substituted for the control of external reality, more or less paralyses reason by institutionalizing thought. Then, when reason, at any given moment, liberates itself and grows stronger, it retains for a long time an excessive confidence in illusory constructions and verbal castle-building.*[1]

In order that the mind may fruitfully operate with words, concepts must remain charged with actual reality. The ideal, *in all its forms, springs from language, but there are false and hollow ideals. In the long run reason, through its logical strivings, assimilates objects to the mind and thereby at the same time assimilates minds to one another. A definitive society rests undoubtedly upon the union of different minds, and it can truly be said that science "has never rendered greater social service than it has done since its liberation from all authority, even from all social discipline, in order to become essentially objective, that is to say, both individual and universal, yet not social, which is an entirely different thing".*[2]

Animated discussions on the logic and the progress of language—in which M. Vendryes likewise participated—took place in 1912 *and* 1913 *in the Société française de Philosophie. The occasion and the basis of discussion were the interesting works of the late and much regretted Louis Couturat, animated as they were by such profound conviction. Couturat was working for the realization of an international language, to be imposed on all peoples and all minds, for this, he opined, is the end to which all the deeper tendencies of linguistic evolution are verging. He firmly believed that human thought and language are intimately connected, and combining a sound understanding of logic with a very well-informed curiosity in the facts of linguistics, he based his endeavours especially upon the works of Meillet, the most philosophical of linguists—remarkable both for their breadth of knowledge and the import of their conclusions—in order to demonstrate that certain fundamental "categories" could be obtained from the comparative study of all human languages. There is a "general grammar" because there is a general human intelligence. "Man is not*

[1] *Ibid., pp.* 188–263; *Weber, Ribot, Janet, op. cit.*

[2] *Belot,* Bull. de la Soc. fr. de Philosophie, *Feb.-Mar.,* 1914, *p.* 131. *Cf. Lalande, ibid., June,* 1910 ("*Les fonctions de la raison*"), *p.* 141.

rational because he is a social or 'political' animal, as Aristotle said : he is a social animal because he is rational." [1]

Let us try to define M. Vendryes' attitude in the discussions relating to the categories and see how, on this point, his outlined sociology is tempered and restrained by the actual facts, till it nears the position of Durkheim himself, in his strongly assertive books, and of Lévy-Bruhl.[2]

" This conception of the human mind, ruled everywhere by the same immutable laws," seems to him—rightly enough—debatable ; but he declares that " whatever may be the difference between the mental habits of different peoples, the existence of certain fundamental traits is undeniable ", and he then leaves it to the logicians to decide whether " behind the medley of grammatical categories there are logical ones, valid for, and imposed upon, all languages by the structure of the human brain." [3]

So far as origins are concerned, he brings together all the possible objections against the attempts made to reduce languages to a common unity, and is extremely reserved in his judgment as to the results of the comparative method. However, he recognizes that " philologists have succeeded in classifying languages into families ". " It is not to be doubted," he adds, " that the progress of comparative philology will eventually increase the number of linguistic families duly established." [4]

With regard to evolution, he says " we profit by the intellectual gropings of our distant ancestors, who facilitated our task by preparing human mentality for it." How much time and effort must have been expended in exercising the brain, he continues, until it could perform its task almost mechanically.[5] *In spite of the mysticism with which " his mind is soaked through and through " M. Vendryes recognizes in it a " rational element " developing step by step and finally triumphing.*[6] *And he shows very forcefully what direction the progress of language has taken.*

[1] *Cf.* L. Couturat, " *La logique et la philosophie contemporaine," in the* Rev. de Met. et de Mor., *May*, 1909 ; " *Sur la structure logique du langage," ibid. Jan.*, 1912. *Cf.* Bull. de la Soc. fr. de Phil., *Feb.*, 1912, *May*, 1913. *Cf. also Lalande*, " *L'œuvre de Louis Couturat," in the* Rev. de Met. et de Mor., *Sept.*, 1914.

[2] *Cf.* La Synthèse en Histoire, *p.* 174, *and* Bull. de la Soc. fr. de Phil., *Feb.* 1912, *p.* 66.

[3] *p.* 113; *cf. p.* 209.

[4] *p.* 311.

[5] *p.* 316. *Cf* La Synthèse en Histoire, *pp.* 191–5.

[6] *pp.* 318–19.

It has proceeded from the concrete to the abstract, from the mystic to the rational. The languages of savages are replete with concrete and particular categories ; those of civilized people have hardly any, while abstract and general categories are ever on the increase. The notion of time, which is a higher degree of abstraction than space, plays a greater rôle among the languages of civilized people than among those of savages.[1] *In the case of the individual, when memory begins to break down, " the abstract has a greater holding power than the concrete. This is doubtless to be explained by the fact that an abstraction penetrates the mind by an intellectual effort, and requires some definite mental intention ; whereas the concrete is simply a reflexion of objects in the mirror of consciousness."* [2]

To insist that the evolution of language is intimately related with civilization is not to belittle logical effort or the rôle of the human factor, but it does restrict the rôle of the social factor. The concept of civilization is quite distinct from that of society.

Moreover, what precisely is civilization ? Is there, arising out of civilization, a hierarchy or progress in language ? M. Vendryes goes far in his scepticism, which deserves the greatest respect, because it arises from an acute sense of the details, so disparate and so inconstant, of linguistic reality, and from a contempt for preconceived ideas put forward as a knowledge of authentic facts. From the exclusively empirical viewpoint of the linguist, he insists upon the differences in grammatical categories in the various languages, upon the obstacles encountered by logic, and upon the chimerical nature of an artificial language. He goes so far as to say : " We have no right to consider a rational and abstract language, because it happens to be our own, as in any way superior to a mystical concrete one. It is entirely a question of two different types of mentalities, each of which may have its merits. There is nothing to prove that in the eyes of an inhabitant of Sirius the civilized person's mentality does not represent degeneration." [3]

Once again, this hyperbole of scientific doubt in the work of M. Vendryes is pleasing to us ; it seems to give a definite value not only to his particular work, but to the work as a whole, which he has honoured by contributing to it. Our theses, which we do

[1] *pp.* 356–9.
[2] *p.* 135.
[3] *p.* 359.

not thrust upon anyone, but merely suggest, are thus confirmed by him. And we believe that, in spite of certain appearances to the contrary, and without M. Vendryes having designed it (this precisely constitutes the experiment), *they will be found to be strengthened rather than weakened.*

The problem of progress is a complex one, and the "values" that go to make up civilization are difficult to determine. The work as a whole must attempt some solution of this problem.

We have now seen how many general questions are raised by M. Vendryes' book, and what valuable suggestions he furnishes towards solving them. So far as special problems are concerned, they are all indicated and treated seriously and fully in chapters specifically designed to show both the results obtained and the research desirable. A special chapter on this subject is not necessary, since the book, as it has been conceived, constitutes a complete inventory of the work done, and still to be done.

During the discussions, already referred to, of the Société de Philosophie, a wish was expressed that Louis Couturat might summarize in an "accessible and up-to-date volume" the existing data on the subject of linguistics. In a note at the end of the Bulletin *for May,* 1913, *however, we read: "M. Couturat has given up, at least provisionally, the suggested project of a manual on the logic of language . . . because he has been informed that Professor Vendryes is preparing a work on language which will probably supply the desiderata and the needs of teachers of philosophy."*

This is the book in question. It will be useful both to linguists and to all who in any other capacity are interested in linguistics. But perhaps its greater utility will consist in pointing out, in connexion with the series in which it appears, that philology is not a science distinct in itself, but can be incorporated in history. Life and thought flow together in language. Dead languages are like fossils which preserve the imprints of the living creature. Living languages express in changeable forms, recorded, nevertheless, in texts, all the inner workings and external influences of life, both individual and collective. Just as the philologist has need of history, so has the historian need of philology—if he conceives history not as a pure and simple account of that which

has been, *but as the more profound interpretation of life in its infinite complexity.*[1]

HENRI BERR.

[1] *No historian has understood or expressed this better than Lucien Febvre. Cf. the* Revue de Synthèse historique, *vol. xxiii, Oct.,* 1911, "*Histoire et Linguistique*"; *vol. xxvii, Aug.-Oct.,* 1913, "*Le développement des langues et l'Histoire.*"

N.B.—We believe the following works will prove a useful complement, from the psychological viewpoint, to the bibliography of this volume: Traité de Psychologie, *in preparation by a group of psychologists, under the editorship of G. Dumas—will contain two articles on language (vol. i, "Le langage, association senstitivo-motrice," by Barat and Chaslin; vol. ii, "Le langage, opération intellectuelle," by Delacroix). The* Journal de Psychologie, *directed by P. Janet and G. Dumas, will shortly publish a special number devoted to language.*

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LANGUAGE

A LINGUISTIC INTRODUCTION TO HISTORY

Στρεπτὴ δὲ γλῶσσ' ἐστὶ βροτῶν· πολέες δ'ἔνι μῦθοι
παντοῖοι· ἐπέων δὲ πολὺς νομὸς ἔνθα καί ἔνθα.

Iliad, XX, 248–249.

Je destinais la dedicace de ce livre
à mon maître et ami
ANTOINE MEILLET;
d'accord avec lui, j'en reporte aujourd'hui l'hommage
à la mémoire des linguistes français
morts pour la France
et particulièrement à celle de mon camarade
ROBERT GAUTHIOT.

J. V.

PREFACE

THERE is no need of a long preamble to justify the place reserved for Language in a series dedicated to the history of humanity. The preceding volumes have acquainted the reader with the stage upon which this great historical drama is to be played. Man, the principal actor, there makes his appearance equipped with all the material resources necessary. Yet even thus prepared he would assuredly have remained incapable of playing his destined rôle had he not been in possession of language. An instrument and, at the same time, an auxiliary of thought, it is language which has enabled man both to understand himself and to communicate with his fellows, and this fact has made the establishment of society possible. It is difficult for us even to imagine a primitive state of affairs in which man was without this efficacious means of action. The history of humanity presupposes at the very start the existence of an organized language ; there could have been no human evolution without it.

But even if the study of language indisputably occupies a place at the head of any general historical survey, there may be a divergence of opinion upon the manner in which this study is to be conceived. Language is complex ; it is affected by different sets of laws, and interests diverse groups of scholars. It is a physiological act in so far as it makes use of several organs of the human body ; a psychological act in that it presupposes voluntary mental activity ; a social act in that it responds to the need of communication between men ; and, finally, it is an historical fact, found under very different forms and at very different times, throughout the world. We may therefore think of language either as the study of the physiologist who classifies the ways in which the speech-organs function ; or of the psychologist who analyses the mechanism of thought while taking into account the findings of mental pathology ; of the sociologist who demonstrates the influence of social organization upon its development ; or finally, of the historian who arranges languages according to families and determines their geographical distribution. Any

one of such scholars could write a book which might perhaps penetrate into the linguistic field, but would start from a point outside the science and would arrive at conclusions extending beyond it.

The writer of the present work, a linguist by profession, prefers to confine himself exclusively to the linguistic field. He starts from linguistic facts as furnished by experience. The arrangement of the book follows the analysis of the linguistic phenomena. Philologists distinguish three different elements in language—sounds, grammar, and vocabulary. The first three sections of the book are accordingly devoted to the study of these three elements. They are thus a study, at once static and dynamic, whose object it is to discover from the facts the causes of the changes which they conceal and to serve as a preparation for the fourth part. This fourth part is concerned with the study of language as such. It deals successively with the definition of language, its different existing types, the methods of formation, evolution, and division of languages, the contact and interaction of one language on another, and, finally, the question of genetic relationships. Our method will be to proceed from the simple to the complex ; sounds, for instance, are simpler than the words and the sentences of which any language is composed. As a result of this arrangement, the first three chapters are the most technical and will also appear the driest. To atone for this, however, the last chapters will open up wider and more varied vistas to the reader who has not been disheartened by the earlier sections. A fifth part, in the nature of an appendix, is devoted to written language. The book, as a whole, is enclosed within two general chapters, one introductory, presenting the problem of the origin of language, and the other a conclusion, discussing its growth.

Around the central linguistic facts are thus grouped all those developments that form the specific subject matter of the book. Although the material is of a varied nature and often embraces related branches of knowledge, the book, I think, possesses a definite unity arising from the viewpoint consistently adhered to by the author. On rare occasions, it has seemed useful to supplement the information gained from linguistics by an excursion into some neighbouring science. The author hopes that these deviations from his principle will not appear

unjustified. In general he has limited himself to presenting the facts as a linguist, judging this to be the best way of interesting workers in other sciences whom he could have assuredly taught nothing new had he encroached upon their fields.

The adoption of this principle, however, imposes a difficult task. To study language as a linguist quite naturally would lead to a specific treatise on general linguistics. Yet anyone who is at all versed in philology knows very well that there are few more dangerous undertakings. For a successful study of this kind, a man would have to be acquainted with all the existing forms of language, and trained in all the languages spoken on the globe. Does such a man exist ? It is doubtful. If it were a question simply of selecting from among the living the particular individual who approximated most closely to such an ideal, scholars might perhaps have little difficulty in making a choice. Yet the fact remains that up to the present moment, no book has appeared in which a programme covering the whole field of linguistics has been entirely realized.

I need hardly say that this will not be realized in the present book either. Irrespective of other reasons, the restricted space at the author's disposal would sufficiently explain why he has not made the attempt. Each of the facts studied had to be considered as a detached fragment belonging to a vast history still to be written. In reviewing the main linguistic questions—and none has been neglected except through error or forgetfulness—he has been forced to restrict himself to the development of characteristic types only. So episodal a method may perhaps suffer from the disadvantage that it divides up the material and thus breaks the connecting link running through all its developments, and to remedy this the author has resorted to something in the nature of a subterfuge. Like everything with a development and a life history, language forms a continuum, in the sense that phenomena have no definitely limited demarcations, and that we pass by a series of insensible gradations from one to the other of the high peaks where each fact manifests itself in all its fullness. It is sufficient, therefore, if we arrange the developments in such a way that their natural transitions become apparent, transitions, that is to say, arising from the nature of the facts studied. Had the author presumed to force the whole material into abstract formulæ, rigidly linked together, serious gaps in

knowledge might have been apparent in the book. These he has evaded by substituting for a complete and rigid system with clear-cut lines, a flexible framework adapting itself to the facts selected, and following their general outline.

By treating the subject in this way the author flatters himself that his task has been made possible without any consequent diminution of interest. He has not offered the reader a manual of general linguistics, but has endeavoured merely to give an idea of what the science of language really is, of the questions of which it treats, and the principal results which it has attained. But even when its scope is thus reduced, the undertaking must seem somewhat foolhardy. What finally induced the author to make the attempt was the valuable support given him by friends who have been good enough to take an interest in the book. He has great pleasure now in thanking them all; in particular M. Meillet, who not only inspired the work, but subsequently took upon himself the labour of reading the manuscript and discussing with him many of the points raised; the reader will undoubtedly recognize the traces of his influence. Another colleague and friend, M. Jules Bloch, likewise read the entire work in manuscript and gave the author the benefit of numerous suggestions. Finally, he wishes to acknowledge all he owes to his honoured colleagues of the *Société de Linguistique*, MM. Delafosse, Deny, Gaudefroy-Demombynes, Isadore, Lévy, Lévy-Bruhl, and Pelliot. Thanks to them, a number of chapters have been enriched with original first-hand data. On those points where their kindness has been laid under contribution the book has gained a precision for which they alone must be given credit. It is no fault of theirs if, taken as a whole, the work is not better.

J. VENDRYES.

MELUN.
July, 1914.

Post-scriptum.—Though the present work was completed in 1914, the manuscript was only sent to the printers in 1920. The course of events is a sufficient explanation of this delay, and no excuse need be offered. But the author would remind the reader that he has before him a work already ten years old. The general arrangement has, in fact, not been altered; and he has confined himself to the correction of certain points of detail in which he has had the assistance of MM. Maurice Martin, Ernest Marx, and Henri Grappin, to whom he is glad to express his thanks.

With a view to a new impression the work was completely revised by the author during the summer of 1924. His additions and corrections will be found in a special Appendix at the end of the volume.

INTRODUCTION

THE ORIGIN OF LANGUAGE[1]

THE statement that the problem of the origin of language is not of a linguistic order always provokes surprise. It is true nevertheless. It is because they did not perceive this that most writers on the origin of language during the last hundred years, have gone so far astray. Indeed, their principal mistake was that they treated the problem as though it were a philological one, as if the origin of language were one with the origin of languages.

Linguists study both spoken and written languages; they follow up the history of these languages with the aid of the oldest accessible documents. Yet however far back they pursue their inquiries, they always find themselves dealing with highly developed languages, possessing a past of which we know nothing. The notion that the reconstruction of the original language might be arrived at by a comparison of existing languages is chimerical, and though it may have been played with by the founders of comparative grammar,[2] it has long since been abandoned.

Some languages have been proved to be older than others, and certain of our modern tongues are known to us in forms more than two thousand years old. But the oldest known languages, the "parent languages" as they are sometimes called, have nothing of the *primitive* about them. Differ though they may from our modern tongues, they only furnish us with an indication of the changes which language has undergone; they do not tell us how language originated.

[1] For a good history of this question, cf. Borinski, **CXLVI**, pp. 3–20; also Jespersen, **CXXXIV**, pp. 328–65. It has given rise to a whole literature. The chief names, which at the same time serve to indicate the chief tendencies or stages in the past, are J.-J. Rousseau, *Essai sur l'origine des langues* (posthumous work); Herder, *Geburt der Sprache mit der ganzen Entwicklung der menschlichen Kräfte*, 1770; J. Grimm, *Ueber den Ursprung der Sprache*, 1851; Steinthal, *Ursprung der Sprache in Zusammenhang mit den letzten Fragen alles Wissens*, 1851 (4th ed., 1888); Renan, **CX**.

[2] Notably Franz Bopp, **CXLV**; see Delbrück, **CLIII**, p. 2, and V. Thomsen, **CCXLI**. Cf. also Whitney, **CXLI**.

Nor can we advance much further by the study of the language of uncivilized peoples. Savages are not primitive peoples, although they have often wrongly been called so. Some of their languages are as complex as the most complex of our own, while others possess a simplicity that our most simple languages might well envy. Both types are the result of changes of whose point of departure we are ignorant. If there is a difference between the languages of so-called civilized peoples, and those of savages, it lies rather in the ideas expressed than in the expression itself. The languages of uncivilized peoples may supply us with useful information about the relations between language and thought,[1] but not on what was the original form of language.

We might, indeed, be tempted to seek it in the language of children,[2] an equally futile attempt. Children can only teach us how an organized language is acquired; they can give us no idea what language was like initially. By observing the efforts made by children to repeat what they have heard adults say, we get more than one indication of the causes of the changes to which language is subjected. But the child returns to us only what he has received; he works only upon the elements furnished by his surroundings and constructs his words and sentences out of them. His is a work of imitation, not of creation; it lacks all spontaneity. Whatever innovations he may introduce are unconscious. They are the result of a natural laziness that is content with using what is near at hand, and is not due to any deliberate creative activity.

Whether, then, he is dealing with the oldest known languages, with the languages of savages, or with those which children learn to speak, the linguist has before him an organism already formed and prepared by the work of countless generations in the course of many centuries. The problem of the origin of language is outside his jurisdiction. The problem is, in reality, bound up with that of the origin of man and of society, and it

[1] Lévy-Bruhl, **XCVIII**, p. 76 ff.

[2] For the language of children, cf. particularly Clara and William Stern's *Die Kindersprache*, Leipzig (1907). See also: Meumann, *Die Sprache des Kindes*, Zürich (1903). (*Abhandlungen herausgegeben von der Gesellschaft für deutsche Sprache in Zürich*); Ch. Roussey, "Notes sur l'apprentissage de la parole chez un enfant," **VII** (1899 and 1900); M. Grammont, "Observations sur le langage des enfants," **XCIX**, pp. 61-82; O. Bloch, "Notes sur le langage d'un enfant," **VI, XVIII**, p. 37; J. Ronjat, *Le développement du langage observé chez un enfant bilingue*, Paris (1913).

belongs to primitive human history. Language has evolved just in so far as the human brain has developed and society has been organized. It is impossible to say in what form human speech first took shape, but we can endeavour to determine the conditions which made speech possible. They are at once psychological and social.

The most general definition of language that can be given is that it is *a system of signs*.[1] To study the origin of language means, therefore, to look for the particular signs naturally at man's disposal and the manner in which he was led to employ them.

By signs, we understand all those symbols capable of serving as a means of communication between men. As signs can be of various kinds there are necessarily many kinds of languages. Any sense-organ may serve to create a language. There is olfactory, tactile, visual, and auditory language. There is language whenever two individuals come to attribute a certain sense to a given act and perform this act with a view to communicating with each other. The use of a given scent on a dress, a red or yellow handkerchief protruding from a pocket, a more or less prolonged handshake—all these constitute the elements of a language directly any two persons agree to use them to transmit an order or a message.

But among the different languages possible there is one more important than all the others, owing to the variety of the means of expression which it provides. This is auditory language, called also spoken or articulate language, and it is the only one with which we shall deal in this book. It is sometimes accompanied, and more frequently still supplemented, by visual language. Among all peoples, gesture, to a certain extent, emphasizes the word, and facial expression, no less than the voice, translates the emotions and thoughts. Mimicry, too, is a visual language, and writing must be regarded as belonging to this category, and, in general, every system based on signals.

Visual language is probably quite as old as auditory language. We have no reason to believe, and certainly no means of proving, that one ante-dated the other.

The majority of visual languages in use to-day are directly derived from the auditory one. This is true of writing, as we

[1] B. Leroy, **LXXXVII.**

shall see in Part V, and it is true of signal codes likewise. The marine signal code, for example, is intended to furnish visual equivalents for the words and sentences of existing languages. It gives us no information as to the origin of signs as representations of ideas. A particular sign has been chosen in preference to another by convention, but a convention with certain inherent limitations. Such languages are by definition artificial. One natural use of visual language is well known, namely the language of gesture, employed by certain savage peoples side by side with auditory language.[1] We are not here dealing with the gestures that accompany words, such as we can observe among civilized peoples, but with a system of gestures which by themselves express what words are meant to express, namely ideas. It is a rudimentary language, but one which has its advantages, for it can be employed for distances where sounds could not carry, though the eye might still be able to distinguish movements. It permits, furthermore, of communication without fear of attracting the attention of persons present, by the use of the voice. Schoolboys use this means of silent communication in the class-room. Gesture language may thus have been utilitarian in origin. Yet the fact that among savage peoples it is specially employed by women, suggests another explanation. A difference of language between the sexes is usually of religious origin.[2] As the words men employ are forbidden to women, the latter have to use a special vocabulary, created by themselves, which can freely substitute gesture for voice when necessary. The survival of gesture language can thus be explained as due to the constraint imposed by interdictions (cf. pp. 184, 220). But whatever its origin may have been, it is only a substitute for auditory language, and to this it must adapt itself.

The gesture language of deaf-mutes is also based on auditory language. It is through gestures that we make known to people thus afflicted the methods and rules of everyday language, and thus enable them to communicate with one another and to read what men who hear and speak have written. By substituting one sense for another we enable them to communicate by signs.

[1] Wundt, **CCXXIII**, i, 1, p. 128.
[2] Van Gennep, **LXXIV**, p. 265 ff.

The case of deaf-mutes invites us to reflect upon the origin of the linguistic employment of signs. We may ask ourselves whether language is an acquired fact resulting from education or, on the other hand, instinctive and spontaneous. Normal children can teach us nothing on this point, From birth they are aware of the exterior world. Before emitting sounds they are brought into relation with their environment by their hearing, and from the moment they speak they find themselves part of the warp and woof of social interchange. In deaf-mutes, on the other hand, an understanding of the sign must be awakened. Incapable of learning spoken language, they are freed by their infirmity from the influences exercised by persons who can speak upon normal children from their earliest years. But deaf-mutes can see, and their eyes will tell them the sort of use to which language is put. In order, therefore, to answer the question propounded, it would be necessary to penetrate into the mind of a human being who was shut off from the external world either by congenital infirmity, or completely deprived from birth of communication with his fellow-men. The second hypothesis need only be stated for its absurdity to be realized. For how could human beings be segregated and prevented from making use of their senses, so that their brains might function as in a dark chamber that has no communication with the outside ?

We all know the strange experiment tried by Psammetichus, King of Egypt, and described by Herodotus (ii, 2). Wishing to find out whether the Phrygians were of a race older than the Egyptians, he had two infants brought up from birth in such a way that they were prevented from hearing any language whatsoever. When the test took place, several months later, it was noticed that when the children asked for food, they used the term βεκός, which means " bread " in Phrygian. From this Psammetichus inferred that Phrygian was the older of the two languages. We might further conclude that the faculty of language was innate in man. The bona fides of this experiment of Psammetichus, if it took place at all, was clearly not above suspicion.

There are, however, experiments which appear at first sight more conclusive. These deal with people born both deaf and blind, and thus cut off from communication with the outside world. There is the case, for example, of the French woman,

Marie Huertin,[1] and of the American, Helen Keller.[2] The latter is particularly interesting. She succeeded in acquiring an education sufficiently extensive to enable her to read and write literary and philosophical works in several languages. In so far as her writings have not been romantically coloured by the influence of her surroundings, they contain some interesting indications.

Helen Keller's language was the result of education. A book published about her [3] describes with emotion the scene when, after several unfruitful attempts, she was finally made to understand the value of a sign. On that day the veil which had hidden the world from her was rent and the complex network which unites things and words was revealed. The interest of this scene, however, is primarily individual. Helen Keller was quite outside the ordinary conditions of life ; her case remains exceptional. The first human beings who spoke would not have been able to understand the meaning of a sign as did this unfortunate girl. The development of language in the case of an abnormal individual hitherto cut off by infirmity from any means of communication with the world cannot give us any idea of its evolution in a society composed of normal beings. It is in the bosom of society that language is formed, and it has existed from the first day when men experienced the need of communicating with one another. It is the result of contact of a number of human beings possessing sense organs and using in their relations with one another the means that nature put at their disposal ; gestures if they lack words, facial expression if gesture does not suffice. The best experiment to make would be to follow Psammetichus, and to bring together two or more children each entirely cut off from all educational influences and ignorant of the nature of language. Whatever the race to which they belonged, and quite apart from the question of hereditary dispositions, it can hardly be doubted that these children would spontaneously create a language for themselves, and that it would not be Phrygian. Need would inevitably bring the organ into action. So must it have been in the beginning.

[1] Louis Arnould, *Ames en prison*, Paris. 10th edition (1919).

[2] W. Stern, Helen Keller, *Die Entwicklung und Erziehung einer Taubstummblinden*, Berlin (1905).

[3] Gérard Harry, *Le miracle des hommes*, Paris.

Language is thus the social fact *par excellence*, the result of social contact. It has become one of the strongest bonds uniting societies, and it owes its development to the existence of the social group.

Language became a social fact only when the human brain was sufficiently developed to use it. Two individuals could have developed a language only because they were already prepared to do so. This is as true of language as of all human inventions. The question has often been raised, whether human language was single or multiple in origin. But this question is really of no interest. Whenever mental progress reaches a certain point of perfection new discoveries come of themselves and from several quarters at the same time. They are in the air, say the scholars, and one can feel them coming as one expects in autumn the fall of ripe fruit in the orchard.

Psychologically the original linguistic act consists in giving to a sign a symbolic value. This psychological process distinguishes the language of man from that of animals.[1] It is wrong to contrast one with the other, and to say that the second is natural while the first is artificial and conventional. Human language is no less natural than that of animals, but it is a degree higher, in that man, having given to signs an objective value, is able to vary it indefinitely by convention. The difference between animal and human language lies, therefore, in the appreciation of the nature of the sign.[2] Dogs, apes, and birds can make themselves understood by their kind ; they have their cries, gestures and songs corresponding to certain physical states of joy, fear, desire, and hunger. Certain of these cries approximate so well to particular needs, that they might almost be translated by a phrase of human language. And yet animals do not express themselves in

[1] Steinthal, **CCVII**, pp. 324–58 ; R. M. Meyer, **XXX**, vol. xii, p. 307.

[2] This idea has been vigorously expressed by Bossuet : " Animals can be influenced by the voice in so far as this represents a breath, emitted and vibrating, but not in so far as it has an agreed significance, which we properly call speaking and hearing " (*Logique*, **I**, vol. xxiv). Cf. *Traité de la connaissance de Dieu et de soi-même*, chap. v, § 5 : " It is one thing to be ' aware of ' a sound or a word, because, physically speaking, it disturbs the air and subsequently reaches the ears and the brain, but it is something quite different to regard it as a sign agreed upon by men, and recall the thing it signifies. It is the latter process which we call understanding a language ; and of this there is no trace in animals."

sentences.[1] They are unable to vary the constituent elements of their cries, complex though these may be, as we can vary the words which are the substitutive elements in the sentence. For animals the sentence is indistinguishable from the word. The word itself, further, be it cry or signal, has no independent objective value. And since it is not determined by convention, animal language does not admit either of change or of progress. There is, indeed, no indication that animal cries ever differed from those of to-day. The bird which utters its call in order to attract the hand that holds out to it a piece of greenstuff, is not aware of its cry as a sign.[2] Animal language implies an adherence of the sign to the thing signified, and in order that this adherence may disappear and the sign assume a value independent of its object, a psychological operation is necessary, and it is this which marks the beginning of human language.

The enigma of the psychological evolution of man ought, in part, to be cleared up by anthropological data. This science teaches us the extent to which the skulls of the cave-men resembled those of anthropoid apes. In the *Chapelle-aux-Saints* skull, for instance, the area reserved for the convolutions in which speech is localized, is markedly restricted. We may, therefore, suppose that the development of language is the result of a natural growth of the human brain. Such an hypothesis does not force us, however, to accept unreservedly Broca's well known theory of cerebral localizations.[3] It is true that this theory has lost much of the favour in which it was once held. It is the fashion nowadays to discredit it. Recent researches indeed claim to have completely demolished it. The chief objection that can be brought against it is that it over-simplifies a very complex question. In the localization of speech *en bloc* in the third left frontal convolution, Broca made only a rough approximation ; and, in particular, in teaching that there are in the brain definite large regions corresponding to the great divisions of the mind, he mis-interpreted the connexion between language and thought.

[1] L. Boutan, "Pseudo-language," Bordeaux (1913), *Actes de la société linnéenne de Bordeaux* ; cf. Meillet, **IV**, vol. xviii, p. clxxvii.

[2] On the language of birds, cf. M. Bréal's minute observations, *Revue des revues*, vol. xxxiii (1900), pp. 629–32, reproduced in **IV**, vol. xi, pp. cx–cxv.

[3] On this question, cf. the excellent summary of Dagnan-Bouveret, **X**, vol. xvi (1908), pp. 466 et seq. Cf. also Dr. P. Marie's works and Dr. F. Moutier's book *L'aphasie de Broca*, Paris (1908).

It is wrong to think of the brain as if it were built on the plan of a grammar, cut into sections for the different parts of speech. All the phenomena of speech are distributed in a freer and wider manner in the brain than Broca thought. At the root of those cases of motor aphasia resulting from accidents, upon which Broca's theory rests, there is doubtless usually a localized lesion. But sensory aphasia, as Wernicke has defined it, often presupposes a general mental deficiency; moreover, substitutive phenomena often occur, by which neighbouring centres can take on the work of those injured by the lesion. Finally, the cortical layers are so arranged that a lesion can provoke various disturbances extending even to the third left frontal convolution, according to the part of the convolution affected.[1] In short, although we may agree to the principle of speech-localization, the details of this localization are still to be worked out.

We must consequently be cautious in our interpretation of the data furnished by prehistoric anthropology. If we were to regard them too narrowly, and to measure the skull of a cave-man as we do that of a contemporary, we might be driven to conclude that he was aphasic. This would certainly be to look for the beginnings of the development of language in a too distant past. But there can be no doubt that the cave-man possessed a brain less adapted than ours to linguistic activity. And we may also suppose that his intellectual activity likewise left much to be desired.

In this distant ancestor of ours, whose brain was not yet developed for thought, language may have been purely emotive at first. It might have originated, for instance, as a simple chant, keeping time with the step or with hand-work,[2] or as a cry like that of an animal expressing pain or joy, or showing fear or hunger. Subsequently the cry, taking on a symbolic value, would have been regarded as a signal capable of being repeated by others; and man, having this convenient procedure at his disposal, would have utilized it for communicating with his fellows, either to anticipate or to provoke some act on their part. Before becoming a rational instrument, language had to be an instrument of action, and one of the most efficacious at man's disposal. After the mind had once become

[1] Wundt, **CCXXIII**, vol. i, p. 494.
[2] K. Bücher, *Arbeit und Rhythmus*, 3rd ed., Leipzig (1912).

alive to the meaning of the sign, it only remained to develop this wonderful invention for the perfection of the vocal apparatus to go hand in hand with that of the brain. In the earliest human groups language became fixed through the operation of laws governing all society. Especially in collective ceremonies did the same vocal or choral manifestations impose themselves upon all members of the group.[1] The constituent elements of the cry or the song thus took on a symbolic value which each individual kept for his own personal use. And little by little, thanks to the increasing multiplicity of social interchanges, there would finally emerge, with all its incomparable richness, that complex apparatus with which thoughts and feelings and every sort of thought and feeling could be expressed.

This hypothesis, although not demonstrable, is at any rate a plausible one. Its object is to render language comprehensible as a natural product of human activity, a result of the adaptation of man's faculties to his social needs.[2] But we must start from consciousness of the sign. This fact once admitted, all language unfolds from it through a series of successive differentiations.

After what has been said on pp. 5, 7, it would be rash to attempt to attain any greater precision or to try to discover how this differentiation has come about, and by what stages it passed from the signal-cry to such varied forms of expression as those which constitute the richness of a language like French. Since in every language there must be certain fundamental forms to be distinguished from later acquisitions overlaying them, the linguist is expected to begin from these superposed accretions and indicate those parts of the language that were constituted first. And sometimes the linguist ventures on an answer. But we must boldly avow that no answer is of value. The ordinary method of passing from the known to the unknown is here invalid. The principles underlying the evolution of the languages known to us do not necessarily apply to those spoken by people whose mentality is differently oriented from ours. The study of language shows that its development does

[1] Borinski, **CXLVI,** p. 38.

[2] "Speech, being the first social institution, owes its form to natural causes alone" (J.-J. Rousseau, *Essai sur l'origine des langues*).

not follow any logical succession along a straight path. It would be an error to imagine that the plan of the *Port-Royal Grammar* could have been imposed upon the human mind at the outset as a frame to be filled in by a methodical progression.

Between the sign and the thing signified, between the linguistic form and the thing to be represented, there is never a natural connexion, only a connexion arising out of certain conditions. It was for a long time believed that the earliest linguistic act consisted in giving names to things, that is to say, in creating a vocabulary. That is the idea to which Lucretius gave expression in the line so often cited,

Utilitas expressit nomina rerum,

wherein he quite rightly attributes the origin of language to the necessity of satisfying some special need. In France, in the eighteenth century, President de Brosses[1] attempted to account for the outward forms of words by the meaning they express. The aim of his research was to construct a kind of sound symbolism which primitive man might have used to create words. To-day, such an attempt only raises a smile. What is essential is not the labelling of objects with special names, but the adoption of a current value for words, by a sort of tacit agreement between speakers, so as to make them into a means of exchange, just as we have substituted cash or paper money for payments in kind.

Nearer our own time, certain linguists have advanced theories according to which every vocabulary is the outcome of a cry analogous to the barking of a dog, or else of a series of sounds which serve to suggest objects of various kinds.[2] It was about the same period that the Vedic scholars attributed all mythology either to lightning or the course of the sun. Philologists and mythologists were then content with simplistic conceptions of phenomena. Discussions took place as to whether language began with nouns or verbs ; the verb expressing action and the noun designating ideas and the quality of objects. But different as noun and verb may appear to us, there is no essential opposition between these two

[1] *Traité de la formation mécanique des langues*, Paris (1765) ; cf. R. M. Meyer, **XXX**, vol. xii, p. 243.

[2] See the details in Jespersen, **CXXXIV**, 2nd ed., p. 330 ff., and Borinski, **CXLVI**, pp. 11 ff., 39.

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"poles" of our grammar. Does the barking of the dog signify "I am hungry" or "Give me something to eat", "This is good" or "I have done eating"? Neither—or both. We may interpret it as we please, by a verb or a noun, an imperative or a past tense. Despite all our efforts, between the primitive "bark" and our oldest tongues there exists a gulf which can never be bridged.

What has contributed toward stimulating research into the primitive forms of language is the comparison which has been established between the philological and natural sciences like geology, botany, or zoology. This inaccurate comparison has rendered ill service to the subject. If we wish to find analogies to language we ought rather to seek them in social science. Michel Bréal went so far as to compare the Indo-European conjugation to "large political and judicial institutions—parliaments or Kings' councils—which, springing from some fundamental need, gradually became diversified, extending their attributes until a later age, finding the machinery too cumbrous, had curtailed a part of it and distributed its functions among several free and independent bodies, which still partook, in a certain measure and with visible signs of their old solidarity, of the initial conception".[1]

This comparison may be applied to language in general, for language is an institution. In language, however, there are certain elements more stationary and less subject to arbitrary human will than political institutions. These elements are sounds, and with them we shall begin our study.

[1] **VI,** xi, p. 284.

PART I

SOUNDS

CHAPTER I

THE SOUND MECHANISMS[1]

BY *sound* we mean the effect produced upon the ear by certain vibrations. In speech, the vibrations are produced by the vocal apparatus of the speaker. The science of sounds in language, otherwise called Phonetics, ought then to comprise three sections, devoted respectively to the study of the production, transmission, and reception of sound. The production and reception are phenomena of equal importance in language, since, in order that language may arise, there must be at least two people in communication and the spoken word must be intended to be heard. The reception of sound, also called audition, likewise plays an important part in linguistic changes ; it is by means of the ear that each speaker acquires and establishes his phonetic system. Theoretically we cannot give audition too great a place in the study of language.

Nevertheless, phonetics has long been practically limited to the study of the production of sound.

Linguists hardly concern themselves with audition, but hand over that study to the physiologists. This limitation is justifiable. With regard to language, the auditory images received by the listener are of value only in so far as he is capable of transforming them into motor images, so that he may in his turn become the speaker. In other words, the listener must potentially possess what the speaker has transmitted into action. This it is that conditions language. Hence phonetics may ignore the auditory side of language, since when two persons converse in the same language audition presupposes the existence of an equal capacity for *phonation* on both sides. These are simply two aspects of the same function whose limits are identical. A careful study of the nerve centres would, undoubtedly, enable us to distinguish them ; but such an analysis does not fall within the domain of phonetics.

At the present day the transmission of sound seems to be the principal concern of the phonetician ;[2] by preference he

[1] Cf. in general to the works of Rousselot, Roudet, Poirot, Passy, Sweet, Jespersen, E. Wheeler, Scripture, Viëtor, Gutzmann, Sievers, Trautmann.

[2] Cf. particularly Rousselot, **CXV**, and Poirot, **CXCI**.

devotes himself to the analysis of vibrations—a vast field of research, tending toward pure physics which cannot be explored except by those who are well grounded in mathematics. Phonetics hence acquires a special precision ; in particular it possesses the means of distinguishing sounds by the frequency and form of the vibrations which characterize them. In this book we shall adhere to the custom of the older school, limiting ourselves to the study of sound-production, that is to say, to phonation, and to the description of the results of phonation, that is, the *phonemes*.

Man's phonetic apparatus consists essentially of a bellows, i.e. the lungs, and a sound-tube, the trachea, closed at its upper extremity by a two-fold swelling known as the vocal chords, or, in a single word, the glottis. It is, therefore, a wind instrument, and an instrument with a double reed. It is in this arrangement of the glottis that is manifested the superiority of the human apparatus to all other vocal instruments. The vocal chords have a flexibility which the necessarily rigid tubes of an oboe cannot attain. Thanks to a delicate mechanism which brings into play several pairs of muscles, they can assume different positions. They can either be kept closed or be more or less completely opened, made to vibrate throughout or in part, and modified as to their tension. All this gives language the variety of resources by which it profits.

At the same time, the sound apparatus would be most imperfect if it consisted solely of the glottis. It would only have been able to express vowels, and these would have been less differentiated than those we normally pronounce.

In fact, the current of air expelled by the lungs while causing the vocal chords to vibrate gives rise to the " voice ". As the vibrations are capable of lasting as long as the supply of air allows,[1] and can vary, moreover, in amplitude and force, the " voice " has three characteristic qualities, namely, duration, musical pitch, and intensity. It also varies according to the individual vowel owing to the fact that the muscular play allows the glottis to rise or fall, and so to elongate or contract the sound-tube.

But the indispensable complement of the phonetic apparatus

[1] Roudet, " De la dépense d'air dans la parole et de ses conséquences phonétiques " (**VII,** vol. ii (1900), pp. 201–30).

is supplied by the cavities into which the glottis opens—the pharynx, the nasal fossæ, and above all, the buccal cavity. The walls of these cavities, for the most part elastic, act as a resonator for the " voice " and give to each vowel its proper timbre. In this resonator are flexible and ductile organs capable of modifying its size and capacity. In the first place there is the *velum palati* or soft palate, which can close the access to the nasal fossæ, and prevent all resonance on that side. But it is the tongue which, together with the glottis, plays the most essential rôle in sound production. In enunciating the vowel *a*, the tongue is extended and lies almost flat in the mouth. But in the case of other vowels the tongue is displaced in order to act in each case as the proper afferent resonator. Sometimes the tongue moves forward and upward, thus decreasing the size of the anterior part of the mouth ; sometimes it moves backward and decreases the size of the posterior part. In the first case it forms the resonator for the vowels known as anterior or palatal, which begin with *a* and continue with open *e*, closed *e*, open *i*, closed *i*. In the second place it forms the vowels known as posterior or velar, that is to say, always begins with *a*, open *o*, closed *o*, open *u*, closed *u*.[1] In each of these anterior and posterior series the *i* and *u* are the most closed, and in forming them the tongue assumes the highest possible position and consequently that closest to the palate. *a* is the most open of all the vowels. For each vowel, moreover, there are several varieties of timbre corresponding to the different resonances and hence to the different positions assumed by the tongue. Parisian French, for example, admits of three varieties of *a*, easily distinguishable by the ear. *a* is closed in *pâte*, open in *patte*, and intermediate in *carotte*.

But the tongue is not the only organ to play a rôle in the formation of the resonance proper to each vowel. We must also take into account the different positions of the lips in each case. There is a well-known scene in the *Bourgeois Gentilhomme* in which we obtain fairly clear information about the movements of the lips in the production of vowels, and from a passage in Dionysius of Halicarnassus we learn that the Greeks, although poor phoneticians, already knew as much about this question

[1] All vowels have their continental value.

as the contemporaries of Molière (*Περὶ συνθέσεως ὀνομάτων*, chap. xvi). As a matter of fact it is easy to see that in pronouncing *u* the lips move forward and become rounded as though in a pout, and that in pronouncing *i* the corners of the mouth retract and pull the lips backward. These are the two extreme positions between which lie those corresponding to the pronunciation of *o* (open and closed) and *e* (open and closed). Language has utilized this simultaneous lip and tongue position in order to create a hybrid series, that of the French *eu*. By combining the tongue position in the anterior vowels (*è*, *é*, *i*) and the lip position in the posterior vowels (*ò*, *ó*, *u*), we obtain almost exactly the three French sounds, open *eu* (*beurre*), closed *eu* (*queue*), and *u* (*flûte*), the last generally written *ü* phonetically.

Between one language and another the differences in the varieties of vowels are very great; English, for example, has scarcely a single vowel in common with French.

Phonemes are usually divided into consonants and vowels. Practically speaking, this distinction is justified by the definition of the syllable (see p. 54). At the same time, the same phoneme is often capable of acting in the syllable either as a consonant or a vowel. Though there may be a difference of function between these two, there is none in the actual nature of the sounds and no definite boundary separates them. Consonants and vowels form part of a "natural series whose extremes alone are clearly separated".[1]

At one extremity of the series stand the vowels *a*, *e*, and *o*, as just defined. At the other are the consonantal occlusive surds *p*, *t*, *k*. These consonants are simply noises and are formed when the air is momentarily stopped by some obstacle. This obstacle is generally in the mouth, and is formed sometimes by the lips, sometimes by the tip or the back of the tongue. In the first case the stop is a labial, in the second a dental, and in the third a guttural. But there are other stops whose point of articulation is in the back of the mouth; these are the laryngeal, pharyngeal, and glottal.

As the lips always close in the same place, there is only one occlusive labial surd. In fact as regards the place of closure, and apart from differences in stress, *p* is the same in all languages.

[1] Rousselot, cited by Roudet, **CXIII**, p. 76.

On the other hand, the tip of the tongue remains mobile, and the back of the tongue is able to move along the entire length of the hard and soft palate, hence there is scope for numerous contacts, and we can understand how there may be several kinds of dentals and gutturals according to the point of closure. Most often the tip of the tongue is pressed against the upper teeth, and that is why the consonant thus produced is called a dental as, for example, the French *t*. But the tip of the tongue may likewise press against the alveolæ, as in the case of the English dental in *take* or *tire*, and it is then an alveolar consonant. Finally, by curling backward, the tip of the tongue can touch the palate and give rise to what some linguists call the cacuminals or cerebrals. These, like the alveolars, are merely special kinds of dentals.

The sounds known as gutturals admit of still greater variety. Any point of the back of the tongue touching any point on the palate will produce a guttural. If the occlusion takes place on the hard palate, we get a palatal (the *k* in the French *qui*) ; if on the soft palate, toward the velum, we get a velar *k* as in German *Kuh*. Velars and palatals, in turn, admit of several varieties ; and we distinguish, for example, the pre-palatals and the post-palatals according to the distance of the point of contact from the hard palate.

Having thus defined the point of contact, let us examine the mechanism of the occlusion. Air is expelled from the lungs ; it passes through the glottis, which is open and tense, and enters the buccal cavity, where it is abruptly stopped at the lips, the teeth, or the palate in the manner just described. The contact then ceases abruptly, and the air can continue to escape. Thus, in every occlusive consonant, there are three distinct stages ; a closure or implosion, a retention of longer or shorter duration, and a release or explosion.[1] In pronouncing a simple consonant, *t* for example, the explosion follows immediately upon the implosion, and the retention is reduced to a scarcely appreciable fraction of time. On the other hand, the three periods are clearly marked in what we call the double consonants, which are merely long consonants pronounced with greater force than the short ones. Apart from the question of stress, a group *atta* is distinguished from a group *ata* by the

[1] Rosapelly, "Valeur relative de l'implosion et de l'explosion dans les consonnes occlusives," **VI**, vol. x, pp. 347–63.

fact that between the implosion and the explosion of breath there is a retention appreciable to the ear. It is incorrect to say that *atta* is composed of two consonants and *ata* of only one. Exactly the same elements lie between the two vowels in both groups : an implosive element followed by an explosive element. But while in *ata* the implosive is followed immediately by the explosive, in *atta* the explosive is prevented from following immediately by the retention, which prolongs the length of the closure.

The difference between the implosive and explosive consonants is very marked when there is a change in the point of contact. Let us imagine that the tip of the tongue is pressed against the teeth at the moment when the air is passing through, but that once the closure is effected, the back of the tongue is pressed rather abruptly against the palate, and that the release of the breath takes place in this position. We then have an implosive *t* followed by an explosive *k*, that is to say, a cluster *tk*, as for example in *atka*. Conversely, if the contact originally took place at the back of the tongue, and the tip of the tongue was pressed against the teeth during the occlusion, we should obtain an implosive *k* followed by an explosive *t*, as in the cluster *akta*.

The above will enable us to appreciate the difference between a vowel such as *a*, and a consonant such as *t*. Physiologically speaking, there is nothing in common between these two phonemes except that both are formed by a current of air expelled from the lungs. But between these two extremes in the sound series there is room for many intermediate sounds.

Let us imagine that the closure is not absolute in the first place, and offers some sort of passage, however narrow, to the air. Instead of an occlusive or momentary stop we shall obtain a *spirant* or durative, called also a fricative, because it is characterized by a frictional sound. Instead of a closed aperture opening abruptly in order to allow the accumulated air to pass through we have an opening which remains exceedingly narrow and allows the air to hiss through it. Naturally the spirants may have all the points of articulation possessed by the occlusives. At every point of contact where the latter are formed, we can imagine a corresponding spirant, as soon as the lips, or the tip or back of the tongue permit the escape of air. Spirants may be dentolabial spirants (French *f*),

dental (French *s*), alveolar (English *th* in *thank* or *thick*), palatal (German *ch* in *ich*), medio-palatal (French *ch* in *cheval*), or velar (German *ch* in *Buch*) together with all the varieties admitted by the differences of position. At the back of the buccal cavity various spirants and fricatives can also be produced—laryngeal, pharyngeal, and glottal like the Arabic *haïn*.

There also exists a series of phonemes intermediate between the occlusives and spirants; these are known as semi-occlusives, or better still, *affricatives*. They are characterized by a closure which is not entirely hermetical. Like the occlusives they have an implosion, but this implosion is followed by a slight opening motion so that the occlusive ends in a spirant. The fricative is an abortive occlusive. Certain languages make frequent use of them, and they can be transcribed as *pf*, *ts*, *kch*. The southern German dialects have long possessed the last two, and the *kch* can still be clearly heard in the German spoken in Bavaria and Switzerland.

The fricatives and even the spirants are still very far from the vowels. However, this distance is not so great as that between the vowels and the occlusives, since the spirants, like vowels, possess length. We can prolong an *f*, *s*, or *ch* for just so long as the lungs allow. But there is a way of bringing occlusives, as well as spirants and fricatives, nearer to the vowels; this consists in giving them *voice*.

We have so far assumed that during the utterance of a consonant the bands of the glottis remained motionless. Hence we have only obtained *surd* or non-sonant consonants, that is to say consonants without "voice" (*voiceless*, *stimmlos* as the English and Germans respectively term them). But if we allow the vocal chords to vibrate as we do in order to "voice" vowels, we get the *sonant* consonants (*voiced*, *stimmhaft*). The difference between sonants and surds is that, when the former are pronounced, other things being equal, the vocal chords are in process of vibration. This difference can easily be felt when pronouncing in succession the occlusives *p* and *b*, *t* and *d*, *k* and *g*, or better still, the spirants *f* and *v*, *s* and *z*, French *ch* and *j*. If the ears are stopped while they are pronounced, the resonances that the glottal vibrations set up in the cavities of the head in connexion with the sonants will be immediately heard. Naturally, all the consonants that we have mentioned up to the present, occlusives, fricatives, and spirants,

admit being voiced, so that if we were calculating the number of consonants possible, we should have to double the preceding list, adding the sonants to the surds.

We now come to a series of phonemes which lie midway between consonants and vowels, and which for that reason are generally termed semi-vowels. Conversely, they might just as well be termed semi-consonants, for they are more in the nature of vowels affected by consonantal factors than of voiced consonants. In the list of vowels on page 21, *u*, *i*, and *ü* were given as closed vowels, characterized by the fact that in order to form their specific resonances the tongue is raised (backward or forward as the case may be) in such fashion as to decrease the space separating it from the palate. As a result, the pronunciation of *u*, *i*, or *ü* entails a frictional noise, which is brought about by the passing of the air between the tongue and the palate.

This rubbing noise is a consonantal element. It is certainly less striking in the pronunciation of these three vowels than in that of a sonant spirant, yet it becomes noticeable when we compare the vowels *u*, *i*, or *ü* with *a*. An excellent way of hearing it is to whisper the different vowels successively. In whispered language which does not admit of sonority and accordingly excludes the "voice", everything is reduced to simple noises.[1] In such a case *a* is also the least audible of all vowels, while *u*, *i*, and *ü* are easily heard owing to the consonantal elements they contain.

Language frequently utilizes this consonantal element by making consonants of *u*, *i*, and *ü*. The same phonemes remain unchanged in each case, but they are being used in two different ways. The consonants corresponding to *i* and *u* are generally written *y* and *w*. In French they occur in *yeux*, *meilleur*, *oui*, and *ouate*. Consonantal *ü*, being rare, has no special sign; in French it occurs in *cuire*, *lui*, *tuer*, *puiser*.

The category of semi-vowels also includes the liquids *l* and *r*, the latter being sometimes described by the more precise term *rolled*. These are consonants which have a definite point of articulation in the mouth, permit a definite position of the tongue, and may or may not be accompanied by glottal vibrations producing sonority. Most frequently they are sonants;

[1] For whispering, cf. Paul Olivier, **VII**, 1899, p. 20 ff.

but there are several languages in which *l* and *r* may be surds. The liquid *l* is a lateral. It is so called from the fact that when the tip of the tongue presses against the palate, the lateral edges of the tongue are lowered in such a manner as to allow the air to pass along its sides. Thus we see that it has certain points in common with the dentals, and in fact the movement executed by the tip of the tongue is very nearly the same in French for *l* and for *d*. There are two other kinds of *l*; one is the liquid *l* formed by the elevation of the anterior part of the tongue toward the hard palate; the other is the velar *l* which is formed when the central and posterior part of the tongue is hollowed like a spoon by the side of the soft palate. Velar *l* existed in Latin, and the Slavonic languages make an extensive use of it.

Liquid *r* is due to a vibration of the elastic parts enclosed in the buccal cavity, and primarily to a vibration of the tongue. There is a dental *r* resulting from the vibration of the tip of the tongue, and a guttural *r* which requires a vibration at the back of the tongue. These *r*'s naturally admit of the same varieties as the dental and guttural occlusives. Lastly there is a uvular *r* produced by the vibration of the uvula. This is the *r* called a burr, and it is one of the most difficult sounds to reproduce when one does not possess it naturally. The dental *r* is the only one used in modern English, and as all the English dentals, its vibration-point is at the top of the alveolæ.

From the preceding description we may infer that the two liquids have all the qualities of consonants; and that, in fact, in the words *rateau, loquet, crapaud, claquer, tarin, milan, halte, article*, the liquids play the same part as the occlusives in the words *bateau, coquet, taquin, mitan, tact, aptitude*. But the position of the tongue in the pronunciation of *l* or *r* forms a resonance like that which occurs in vowels. Besides, liquids can be prolonged, and when sonant, as they are, can be employed as vowels to form a syllable. In the German words *Acker* or *Löffel*, the last syllables consist of scarcely anything but an *r* and an *l* which play the part of vowels. Certain languages, like Czech, which normally use *r* as a vowel, transcribe it simply by the sign for consonantal *r*; thus *krk* "neck", *prst* "finger", *vrch* "summit".

Being indifferently vowels or consonants, the sounds we have just discussed can be used in yet another manner, as the second element of a diphthong. By a diphthong we mean the

combination of two vowels to form a single syllable. The two vowels do not possess the same value, however, for the diphthong is composed of a strong element and a weak one which is generally the second. It is the closed vowels *i* and *u* which best lend themselves to the rôle of the weak or second element. Thus in *ey, oy, ay, ew, ow, äw,* the sound which follows the vowel is properly speaking neither a vowel nor a consonant; it is a diphthongal element. Several Indo-European languages testify to the fact that the second diphthongal element plays a rôle distinct from that of vowel or consonant. At the same time the same languages allow the liquids *l* and *r* to serve as the second member of the diphthong. Lithuanian has conserved to the present day a special treatment of *er* and *el,* exactly parallel to that of *ey* and *ew.*[1]

Finally, there is an important class of phonemes which we have not yet mentioned—*nasals.* In all the preceding descriptions we have assumed that the uvula remained close to the top of the roof of the palate, and consequently excluded the air from the nasal fossæ. But the uvula can be lowered towards the base of the tongue, and then the air expelled from the lungs enters the nasal fossæ and escapes through the nose as well as through the lips. In fact, a complete closure rarely takes place. The production of the vowels already considered actually entails the passage of a very small quantity of air into the nasal fossæ. But language makes use of a complete aperture to produce what we call nasals. With some exceptions, due to the character of the organs, all the phonemes previously mentioned, consonants as well as vowels, have a nasal variety. When the uvula is lowered in pronouncing a sound, without any change in the articulation or the position of the tongue, we have a nasal phoneme, be it consonant or vowel. Every Frenchman is well acquainted with nasal vowels through his mother-tongue, which possesses an imposing number. The syllables we write as *an, on, in, un,* represent *un* sounds, in which nasal resonances are added to the natural timbre of each vowel. The vowel is nasalized inasmuch as the uvula is lowered during its articulation, and a quantity of air coming from the glottis passes out by way of the nasal fossæ. It is well to observe that in graphic representations the nasal vowels *an, in,* and *un* do not exactly correspond to the vowels *a, i, ü,* but rather to *ò, é,* and *eu.*

[1] Meillet, **XCIV,** p. 89.

The same mechanism produces the nasal consonants. All consonants may be nasal and certain languages are known to possess a nasal form of *v*, *l*, and *r*. But in general we reserve the term nasal for sonant occlusives with nasal resonances. When the uvula remains lowered during the occlusion of *b*, *d*, *g*, we get the nasals *m*, *n*, Spanish *ñ* (written *gn* in French). These phonemes can be prolonged, but the air naturally escapes only through the nose, since the buccal occlusion prevents any passage of air. There are as many nasals as there are sonant occlusives. Those which correspond to the occlusive surds, and which are theoretically possible, are in fact somewhat rarely used.

We have just seen that nasals possessing length and voice, entail a resonance from the nasal fossæ. That is to say, they are capable of playing the part of vowels as well as the liquids. Many languages in fact possess nasal vowels, and we know that they were present in Indo-European. To-day that can be very clearly heard in the second syllable of the German words *Atem* and *bieten*. Furthermore, Indo-European used the nasals *n* and *m* as second members of the diphthong, and treated *en*, *em*, *on*, *om*, for example, like *ei*, *eu*, *oi*, *ou*. Ancient Greek preserved traces of this use in its accentuation, and Lithuanian still furnishes us with examples of the same thing.[1]

Nasals perceptibly augment the list of sounds emitted by the human sound mechanism. But even with these we have not yet exhausted its possibilities. The reason why the list of possible sounds is almost limitless is that the elements composing them are for the most part interchangeable, and contain a number of variables.

A vowel is pronounced on a definite note with a definite stress for a definite duration ; and pitch, stress, and quantity multiply the varieties of every vowel. And as there can be different quantities in the same language, and since pitch and stress permit of modulations and intonations, these different varieties contain within themselves the causes for multiple variation.[2]

[1] Meillet, **XCIV**, p. 89.

[2] On the relations of quantity, pitch, and stress in the Slavonic and Baltic languages, cf. especially the fine work of F. de Saussure, **VI**, vol. viii, p. 425, and **XXX**, *Anz.*, vol. vi, p. 157, and Gauthiot, **VI**, vol. xi, p. 336 ; cf. also Fortunatov, **XXVII**, vol. xxii, p. 153.

The part played by quantity in the classic languages may be realized in connexion with their versification. The same is true of Sanskrit. With regard to musical pitch, we have remarkable examples, in certain languages of the Far East, in which intonation alone suffices to distinguish the meaning and value of words that would otherwise be homophones. In Chinese, one monosyllable may be pronounced in six different tones, or differently intoned to designate six different objects. There is still greater variety in Annamese ;[1] for the syllable *co* fifteen different pronunciations have been counted, corresponding to the most varied meanings.[2]

There are still other variations possible, even in the manner of forming the resonance proper to each vowel. There is the hard vowel *hard attack*, the *fester Einsatz* of the Germans, and the *soft attack* or *leiser Einsatz*. The difference lies in the way the glottis is opened when an initial vowel is pronounced. In the hard attack the glottis opens abruptly, and separates the vowel clearly from all that precedes it ; this method is customary with North Germans. It is so typical that it serves to distinguish a German from either a Frenchman or an Englishman, both of whom use the soft attack. The English phonetician Ellis uses an excellent analogy to show the difference. The early dawn breaks so gradually and insensibly that it is impossible to say when night ends and day begins. This is the soft vowel attack. On the other hand, when the closed shutters of a window are suddenly opened at midday a blaze of light completely floods the room in a single moment. This is the hard attack. This abrupt procedure is not even limited to the opening of the glottis. Certain languages, Danish for example, also use it to mark closure. It is directly after the vowels, when the emission of air is complete, that this catch or " stop " occurs (*Stoss* in German, *Stød* in Danish). The two Danish words *anden* " duck ", and *anden* " the other ", differ only in the presence or absence of the *Stød*. Certain English dialects, and especially that spoken in Scotland, furnish equally good examples of the " glottal stop ".[3]

The pronunciation of consonants also admits of very important variations quite apart from the differences in articulation

[1] Cadière, **LVIII**, p. 79 ff.
[2] Grammont, **VI**, vol. xvi, p. 75.
[3] Jespersen, **CLXXIII**, p. 79.

described above. Two at least are deserving of mention here; those due to muscular effort, and those dependent upon the extent of the glottal opening.

Not all languages require an equal expenditure of muscular force in the production of articulatory movements. In certain of them the effort is reduced to a negligible degree, speech flowing along in a continuous and easy fashion, with a sustained evenness of tone. In others, on the contrary, there is a muscular vehemence which produces upon the ear an impression of violence, with abrupt stops, jerks, and shocks.

Even in the same language, certain phonemes demand a greater muscular effort than others. This fact had already struck the ancient Greeks who distinguished their consonants as strong and weak. In general, the difference in stress is related to the contrast between sonants and surds. This was the case in ancient Greek, and it is the case in French, where the consonants *p*, *t*, *k*, are at the same time surds, and strongly enunciated, and the consonants *b*, *d*, *g*, on the contrary, are at once sonant and weakly enunciated. But there are some languages in which this distinction is unknown, or made in a different fashion. Thus one of the differences separating French from the German occlusives is that in German, especially South German, the sonant occlusives *b*, *d*, *g*, are strong, and appeal to the French ear as sounds intermediate between sonants and surds, sometimes even more closely akin to surds than to sonants. Conversely, the surd conclusives *p*, *t*, *k* in South German are often weak; even as we shall see, when they are not aspirated.

Another cause for variation in the pronunciation of consonants lies in the size of the glottal opening. There are occlusives formed by an open glottis, and others formed by a closed glottis.

Where the glottis is closed, as in French, and also in Slavonic and ancient Greek, the bands of the glottis, or the vocal chords are drawn together during the pronunciation of the occlusives. They are thus ready to vibrate for the vowel following, if the occlusive is a surd, and to voice the occlusive as soon as the implosion has begun if it is a sonant. On the other hand, when the glottis is open, as it generally is in the German languages,[1]

[1] Meillet, **XCV**, p. 36, and **IV**, vol. xvi, p. cliii; Grammont, **LXXVIII**, p. 84.

the vocal chords require a certain length of time to get into position for vibrating, either to voice the consonant at the moment of implosion or to produce the vowel immediately after the explosion. Most commonly there is a slight delay, due to lack of co-ordination between the occlusive and the setting up of the glottal vibrations. The principal difference between these German and French sounds consists in the fact that the glottal vibrations take longer to start in German than in French. That is one more reason why the French, on hearing a German pronounce *ba, da,* or *ga,* interpret the sounds as *pa, ta, ka.* In French the consonant is sonant from the initial stages of the implosion ; in German the first part of the consonant is surd, as the sonancy does not commence until an appreciable time after the implosion (see p. 38).

Pronunciation with the glottis open entails another consequence. Throughout the entire duration of the occlusion the air expelled from the lungs continues to accumulate in the mouth, since nothing opposes its free passage at the end of the trachea ; on the other hand, when the glottis is closed, the glottal bands obstruct the passage of the air, or partially so at least. In consequence, the air escapes from the mouth with much greater violence where the glottis is open, for where it is closed the glottis serves to some extent as a moderating agent to the air-current. The rush of air is generally so violent that we hear at the moment of explosion, a noise characteristic of the sudden emission of air, which we improperly term " aspiration ". On the other hand, as we have just said, since the setting up of the glottal vibrations is slightly retarded for the vowel that follows, a shorter or longer period of time elapses during which no vowel or consonant is as yet formed. This period of time is naturally taken up by the aspiration, and we finally get what is called an aspirated consonant. Instead of *p, t, k,* we pronounce these letters *ph, th, kh.* Consonants of this description could be easily distinguished in the speech of a South German if he were asked to pronounce *le pavé de Paris, une tasse de thé, un carreau de cassé.*

In the above description we are far from having exhausted all the possibilities of phonemes, for we have thus far accounted only for those produced by an expiration of breath. But there is also a group of inspirated phonemes. Theoretically, we might

reclassify all the phonemes of the preceding list, imagining them to be produced by " inspiration ". This would double our list. The term inspiration or inspirated is, however, incorrect, for in the introduction of the phonemes in question there is no introduction of air into the respiratory apparatus. These sounds are due simply to a suction movement ; they are often called " clicks ".[1]

The inspirated phonemes or clicks are somewhat rare. It is said that certain African tongues normally use them, but they do not figure in the phonetic system of Indo-European languages. They are only encountered by accident here and there. It has been established that in modern Breton the development of the *p* at the end of the first person plural (e.g. *karomp* " we love ", from *karom*) is due simply to the presence of a click.[2] But this is exceptional in modern European languages.

Nevertheless, clicks are used as interjections in all languages. Thus French has an inspirated *t* to express doubt or attract attention ; by inspirating an alveolar *t* we show admiration or surprise ; inspirated *f* sometimes expresses the satisfaction of the epicure and at other times a feeling of effort, or pain, either keenly or slightly experienced. The word *oui* when it means a doubtful or complaisant " oui " (yes) is often inspirated, as in *non* (no) when uttered in a low and careless voice.

[1] L. Havet, **VI,** vol. ii, p. 221 ; Sacleux, **CXVIII,** p. 44.
[2] Rousselot, **CXV,** vol. i, p. 492 ; cf. also Loth, **VIII,** vol. xvi, p. 201.

CHAPTER II

Phonetic Systems and their Transformations

THE number of possible phonemes is almost infinite. No musical instrument can emit sounds as varied as those produced by the human apparatus. But languages utilize by no means all the linguistic resources. On the contrary, the number of phonemes in each language is limited.

The number of phonemes in a language cannot, of course, be calculated by the number of signs in its alphabet. Languages generally have more sounds than signs. . This is the case in French, Italian, English, and German. Yet, in the main, the number of phonemes hardly ever exceeds three score, and may even be considerably less.

Such an estimate need not astonish anyone ; owing to the variety of sounds the human apparatus produces, they cannot be employed in too great a number in any one tongue without embarrassing the speaker. Besides, many of the possible sounds are mutually exclusive, owing to the conformation of the organs of speech.

In every language the phonemes are closely allied to each other. They constitute a coherent and closely knit system in which all the parts correspond. This is the first law of phonetics, and it is extremely important, for it means that a language is not made up of isolated phonemes, but of a system of phonemes.

Those who are acquainted with foreign languages are well aware that each language has a *phonetic system* peculiar to itself. In passing from one language to another, they do not carefully consider each word and adjust their organs to the correct position for producing the phonemes composing that word. In that way they would never succeed in speaking fluently. It suffices, in changing from one language to another, to adjust the organs, once for all, in a general way. If the foreign language they are speaking is a familiar one, there is an unconscious adjustment of the vocal organs by which all the phonemes conform to the new tongue. The polyglot is like a harmonium-player, who by changing his keyboard gives a

particular value to each sound he produces. This adjustment can readily be seen in the fatigue experienced after speaking an unfamiliar language for any length of time. The organs have been forced into new positions, requiring equally new muscular efforts. The exercise thus imposed upon them, if prolonged, causes fatigue very quickly. Those who wish to imitate a foreign pronunciation when speaking their own tongue know, moreover, that the only thing needed to produce the desired effect is what we might call a phonetic transposition. When this transposition is achieved, the same page of French can give the impression that it is being read by an Englishman or a German.

The existence of a phonetic system is the result of a law of equilibrium. It establishes a kind of balance among all the organs which co-operate in a phonation by virtue of which to each position assumed by any particular organ there is a corresponding position for others. But the accord is not even limited to the position of the organs; it extends likewise to the muscular effort. Certain phonemes, for example, are pronounced with more breath than others, or with a greater articulatory effort. Besides, differences in quantity are usually bound up with differences of timbre.

In French, *a* and *o* generally differ in timbre according to whether these vowels are short or long. This can be seen, for example, in the pronunciation of *pâte* and *patte*, of *côte* and *cotte*, *saute* and *sotte*, etc. An analogous difference exists in German, between short *e* and long *e*, short *o* and long *o*; in *Stehen*, and *Reh* as opposed to *Stelle* and *retten*, or in *Sohn* and *Boden* as contrasted with *kommen*, *Gott*, etc. It is the same with many other languages.

The phonetic system is far from stable throughout the development of any given language. This is intelligible when we stop to reflect upon the manner in which it is transmitted, and upon the conditions which maintain its equilibrium.

The system becomes fixed at an early age, and, apart from accidents which may affect the vocal organs, it tends to remain intact throughout life. But the apprenticeship is not completed at a single stroke. During the early years, which are of capital importance in the development of language, the child continually stores up from day to day words which he tries to reproduce just as he hears them. These are not individual

sounds which he has learned to pronounce, but words or groups of words. Hence his organs must accommodate themselves to producing sound combinations which are sometimes exceedingly complicated. The child is rarely successful at the first attempt. He has to make the effort several times, correcting his pronunciation by reference to that of the people who speak to him, until he feels that he is able to reproduce exactly what he hears. The forms adopted permanently at the end of his apprenticeship constitute his phonetic system, which he establishes by successive trials by eliminating incorrect sounds and by making his vocal chords flexible enough for perfect execution.[1] The production of these movements finally becomes automatic. The vocal organs have a memory comparable to that of the pianist's fingers, which move mechanically over the keys as the eye follows the notation on the printed paper.

The transmission of pronunciation from one generation to another is discontinuous, in the sense that the child is forced to learn everything over again. During apprenticeship, doubtless, hereditary dispositions play some part, but it is not difficult to realize how many accidents may affect the integrity of pronunciation with each new generation. It rarely happens, indeed, that when its apprenticeship is ended the child's phonetic system is exactly like that of its parents. Some phoneticians even claim that this never happens.

In this interplay of complex movements which constitutes the phonetic system, the organ may either exaggerate or inhibit its action to a very slight extent. A muscle may be somewhat weak or slow in executing a movement or it may, on the contrary, be unusually vigorous and rapid. As a result there is a discrepancy between the phonetic systems of successive generations. This lack of agreement may be a very minor affair, and may not even be appreciable to the ear; nevertheless, it is serious in its consequences, for it means nothing less than a a break in the continuity of the phonetic system. Sometimes, however, the discrepancy is clearly marked. The child articulates differently from its parents, and substitutes a different series of sounds for that which they possess. Thus a

[1] Cf. the works cited at the beginning of the chapter preceding and also A. Meillet, **IX**, i, p. 311, and ii, p. 860.

child who acquired the habit of pressing the tip of his tongue against the top of his alveolæ instead of placing it against the teeth, instead of pronouncing the French dentals would pronounce the English *t* and *d*.

This kind of phonetic change presents several very important features. In the first place it is *unconscious*. The child whose tongue goes either too far or not far enough is not aware of the excess or inadequacy of his efforts. He thinks he is articulating like his parents when he is really articulating differently. It is the unconscious nature of the change which explains its permanence. The child would endeavour to correct himself if he were conscious of his mistake.

Furthermore, the change is *absolute*. That is to say, that the change is complete and irremediable. It is not to be regarded as a spontaneous creation adding a new element to the system, but as the transformation of an existing element. This transformation presupposes that the child is incapable of exactly reproducing a phoneme he has heard. It is rather striking that the phoneme abandoned for another is, of all the phonemes, usually that one which is foreign to the system : the one that is most difficult to articulate. No one has more difficulty in pronouncing a liquid *l* than the French of the present day, who have just lost it.

Lastly, the change is *regular*, that is to say, its direction has been determined by previous changes. This feature is explained by the nature of the elements which build up the equilibrium of the system. In all phonetic systems there are dominating elements which regulate the others. In describing the system of any mode of speech, we can always account for all the peculiarities of that speech by reference to certain general principles of tongue-position, breathing-force, or muscular effort. Doubtless these general principles hold good only for a given time, since the system changes more or less from age to age ; but at that particular moment they constitute the framework and skeleton of the language. From the point of view of the gradual evolution of the language, these general principles indicate its natural tendencies. And, indeed, it has been proved, by comparing two different historical periods of a language, that the changes exhibited by the latter existed in germ in the earlier period.

The classic example of regularity in phonetic changes is the Germanic "sound-shifting", called in German, *Lautverschiebung*.[1] This phenomenon is found in other languages besides the Germanic: in Armenian, for example, and Ossetic. The initial cause of the development lies between pronunciation with the glottis closed, and a pronunication with the glottis open (see p. 31).

When a certain race is accustomed, like the Germans, to speaking with the glottis open, the sonant and surd occlusives are subjected to a series of alterations, due to a delay in the starting of the glottal vibrations (see p. 31). On the one hand, in a group such as *da* or *ba*, as the vocal chords do not begin vibrating immediately upon the implosion, a more or less large part of the consonant becomes surd; and there is finally a tendency to change the entire sonant into a surd. On the other hand, in a group such as *ta* or *pa*, between the explosion of the occlusive and the production of the *a* which follows, there is a more or less short interval. But the explosion allows the air free passage. Hence there is a natural tendency to change the occlusive into an aspirate, or even into a fricative, particularly if the explosion is violent and if the organs, despite the abrupt rush of air that is seeking to escape, do not immediately return to a position of rest. We then get the pronunciation *tha*, *pha*, or even *tsa* or *pfa*. If the rush of air renders the occlusion incomplete, the natural tendency for aspirates and fricatives is towards the spirant (*pa*, *fa*).[2]

The two processes we have just explained play a considerable rôle in the history of the Germanic languages. It is these which account for the fact that the Indo-European sonant occlusives always correspond to the common Germanic surds (Gothic *skapjan* "to shape", *itan* "to eat", Old High German *melkan* "to milk", as compared with the Latin *scabo*, *edo*, *mulgeo*); and the surd occlusives always correspond to spirants (Goth. *hlifan* "to fly", *pahan* "to be quiet", as compared with the Greek κλέπω Latin *taceo*). These are the only two shifts

[1] The interpretation of this phenomenon given here is that generally approved by French linguists (Meillet, **XCV**, p. 27; Gauthiot, **VI**, vol. xi, p. 192; Vendryes, **XCIX**, p. 130). It is not admitted by everyone; cf. now Wundt, **CCXXIII**, i, 2, p. 405; H. Meyer, **XXXV**, vol. xlv, p. 107 ff.; Hirt, **CLXVII**, p. 615; S. Feist, **XXVI**, vol. xxxvi, p. 307, and xxxvii, 112.

[2] The sign *þ* indicates the dental and spirant heard in the English *thick* or *thank*.

characteristic of Germanic.[1] But the spirant developing from the surd occlusive is not always surd ; there are cases where it appears as a sonant. The Danish linguist Verner accounted for this by showing [2] that it became a sonant only in words where the following syllable bore no accent in Indo-European.

In fact a certain number of different tendencies cut across the interplay of the sound-shifts. For example, in several other languages, the spirant surds become sonants in intervocalic positions (Verner's discovery serves only as a corrective test to this general one). There is another tendency, according to which the sonant spirants, by a sort of rebound upon the speaker, react against the weakening they have undergone and become sonant occlusives. The second case has taken place in German. Thus the corresponding German words for the English *thin*, *thumb*, and *thorn* are *dünn*, *Daumen*, and *Dorn*, which were initially spirant before they became occlusive. This evolution is most clearly seen in the case of the dentals. It even extends sporadically outside the German field (English *gold*, *wild* as compared with the Gothic *gulp*, *wilpeis*). Several other spirants show the same evolution in this respect [3] ; thus in several dialects initial *w* becomes *b* (*bas* for *was*, or *beil* for *weil*), or *j* becomes *g* after *r* (*Ferge* " pilot ", *Scherge* " sergeant ", both developments from the primitive *verjo*, *scerjo*).

These examples show that all the changes which Germanic consonants have undergone cannot be ascribed to a single law. It is remarkable, however, that throughout all the changes resulting from special conditions, the general tendency which manifested itself in prehistoric shifts continued to make itself felt throughout the history of Germanic languages ; thus about the sixth century of our era, after Old High German had achieved its second sound-shifting, modern German, at least in the southern districts, had begun to prepare a third ; in another section of the field, the Danish language, a new shift is actually now in the process of development.[4]

A phenomenon like sound-shifting, which is a good

[1] The Germans, followed by the linguists of other countries, generally call the laws of the Germanic sound-shifting *Grimm's Laws*, although they were discovered before Jacob Grimm by the Dane Rask ; cf. Pedersen, **CCXXX**, p. 52 ff.

[2] In a celebrated article, **XXXVII**, vol. xxiii, p. 97.

[3] Behagel, **CXLIV**, pp. 201, 204.

[4] Braune, **XXVI**, vol. xxxvi, p. 564.

example of regularity and continuity, demonstrates at the same time that phonetic change can often extend to a very large part of the population. In order to appreciate the nature of a change it is not sufficient merely to compare the child's pronunciation with that of its parents, that is to say, merely to consider an isolated individual in each generation. The only change which counts for anything in the eyes of a linguist is that which occurs in the speech of a whole group of individuals.

The greatest phonetic changes take place during the passage from one generation to another. We have still to determine what relation individual changes and general changes bear to all the children of one generation. It may happen that a child, because of a congenitally defective constitution, is incapable of pronouncing certain sounds, and has, in other words, a defective pronunciation. These individual defects are generally interesting only to the physician. All the same, they may be of service to the linguist in indicating the phonetic tendencies of a language. Sometimes, indeed, they only consist in the exaggeration of a natural tendency. They are then symptomatic, in the sense that they betray the weak points in a phonetic system. They show at what place resistance is weakest, and in what direction new phonetic tendencies threaten to lead the language. This work, however, requires great circumspection on the linguist's part, and in general it is best to leave it outside the field of our investigation ; more than one individual must be studied in order to recognize a tendency.

For a long time it was believed that all phonetic changes started from an individual and were only individual changes generalized. This conception is incorrect. No individual could have the power of imposing upon his fellows a pronunciation against which their instinct would rebel. There is no force capable of generalizing a phonetic change. In order that a phonetic change may become general for a social group, all the members of the group must possess a natural tendency to adopt it spontaneously.[1] To attribute this to imitation is here beside the point. An aberrant pronunciation brings its author no disciples, and generally only tends to make him ridiculous.

We might here protest that fashion is the determining cause, and this cannot be denied in certain cases. We know that in

[1] Meillet, **IX,** I, p. 311 ; **II,** p. 860 ; and **II,** vol. IX, 595.

imitation of the Beauharnais family, who followed the creole custom, and did not pronounce the *r*, aristocratic society of the Directoire Period affected the elimination of this consonant. This was the fashion of the *incoyables*, which did not last long, and left no traces except in the legends of prints and in almanacs. Antiquity has known similar freaks of fashion. Alcibiades was in the habit of pronouncing *r* as *l* (Aristophanes, *Wasps*, 44–6), and his son thought it proper to imitate him (Archippos, mentioned by Plutarch, *Life of Alcibiades*, 41). Catullus makes fun of a Roman of his day called Arrius, who in imitation of the Greek aspirated the Latin *c*, pronouncing *commoda*, for example, as *chommoda*.

These are exceptional cases which, properly understood, only confirm the rule. Indeed, it will be observed that these phonetic changes have not come to an end. The Latin peoples continue to pronounce their *c* as an occlusive, and the history of *c* in the Romance tongues does not appear to have been interfered with by the fashion which Arrius represents. The particular pronunciation of this snob has remained foreign to the phonetic system of the Latins. True, it may have persisted for a longer or shorter time in some isolated words. This would no longer be a matter of phonetics, but only of vocabulary. Moreover, the question arises whether this mania ridiculed by Catullus was not at bottom a mere matter of vocabulary. It is hardly likely that Arrius changed every *c* in his language to *ch*, that is to say, systematically substituted one articulation for another. All he did was apparently to introduce *ch* in place of *c* in certain words to make them seem like the Greek.

The case of the *incroyables* is quite different, for they introduced into normal French, the French of Paris, a peculiarity of pronunciation belonging to another French dialect, that of the creoles of Martinique. The elimination of *r* in French, however, seems to conform to a general tendency of the language, at least in so far as the guttural *r* characteristic of Parisian French is concerned. In certain positions, at the end of a word, after a consonant, and even in an intervocalic position, this *r* is scarcely recognizable to-day. But for the influence of scholarship and traditional literature, perhaps it would already have disappeared. The English alveolar *r*, articulated in quite a different place, is likewise gradually

disappearing, and many English people, perhaps without being aware of the fact, pronounce it no longer.

It is customary, in comparative philology, to express phonetic changes in the form of *laws*.[1] Such is the so-called " Grimm's law " of the Germanic sound-shifts. We may already estimate the value which should be attached to the word " law ", from the foregoing. An utterance which has become famous in philology proclaimed that " phonetic laws work blindly and with a blind necessity ", *die Lautgesetze wirken blind, mit blinder Notwendigkeit*.[2] This utterance, which provoked violent polemics in its day, now inclines us rather to smile. The very least we can say of it is that it is somewhat rash, as it gives to phonetic laws an altogether unwarranted authority. Phonetic law is not a constant principle, and it is not, in the scientific sense of the term, a " necessity ". It is the abuse of the term " law " that has here led to error.

Laws are made to control the actions of men, and, consequently, are oriented towards the future ; thus penal law regulates the fate of the guilty, and civil law dictates the behaviour of citizens. It is unfortunate that the word law has been stretched to embrace natural principles, which have been established by experience, as in physics or chemistry. Such an extension has been favoured chiefly by the fact that in these sciences experiment shows a constant relation between phenomena, so that law, which is a simple statement of relationships, gives us the impression of preceding the experiments, when in fact it only follows them. It is an abuse of language, however, to attribute an imperative character to " law " used in this sense.

Phonetic laws can in no way be assimilated to those of physics and chemistry. The link uniting two successive states of a language is a circumstantial and not a natural one. We cannot anticipate a priori how a particular sound will develop, because into the evolution of sounds, there always enters a

[1] Cf. the bibliography in van Ginneken, **LXXVII**, p. 462, and especially : Meillet, " Les lois phonétiques," **IX**, vol. i, p. 311 ; Wechsler, *Gibt es Lautgesetze* ? ; B. Delbrück, " Das Wesen der Lautgesetze " (**XXIV**, i, 277–308 (1902)) ; J. Vendryes, " Réflexions sur les lois phonétiques " (**XCIX**, 115–130 (1902)), and Baudouin de Courtenay, **CXLII**.

[2] This was said by the German linguist, Hermann Osthoff (1890). The existence of phonetic laws was first demonstrated as a principle between 1870 and 1880. Cf. Schuchardt, **CCIV**.

varying number of unknown factors. Nevertheless, as a formula expressing changes that have taken place in the past, phonetic law is absolute. This character results from the general coherence of the phonetic system and the regularity of the changes (see p. 37) that take place. As these affect articulation as a whole, rather than isolated words, all words involving the same articulation become altered in the same way. Therein lies the only principle of phonetic law. Such laws are simply formulæ which sum up processes and rules governing correspondences.

These phonetic laws, then, enable us to include in certain formulæ the history of the sounds which occur in any language, and provide us with a key to the changes they have undergone. If we know a word in a given language whose form can be accounted for by a phonetic law, we also know the forms of all other words in that language coming within the range of that law. Given two dialects sprung from one language and following a definite law, a knowledge of that law will reveal the phonetic principles involved in each of the dialects. If I know that German has substituted an initial *z* for the original *t* preserved in English, I at once understand why I find the form *Zähre* in one as opposed to *tear* in the other ; but I understand also the opposition of *zehn* to *ten*, *zwingen* to *twinge*, *Zunge* to *tongue*, etc. One of these words enables us to predict the other. It happens occasionally that philologists have reconstructed a priori the form of some non-existent word, and have been subsequently justified by the discovery of a new text containing that word. Phonetic laws are the basis of all etymological research. Any etymologist who ignored them would labour in vain.

It is easy to demonstrate, likewise, how these laws aid in the study of foreign languages. In learning a new language it is of great assistance to know the rules governing sound-correspondence between this language and those we already know. Thus, if I know that Spanish changes the initial Latin *f* to *h*, I know that " faire " is *hacer*, " farine " *harina*, " foin " *heno*, " fer " *hierro*, " fils " *hijo*, " feuille " *hoja*, " fumée " *humo*, etc. There is a kind of *flair* which guides the memory in such cases, and which at need will substitute the proper form with some guarantee of correctness. Possibilities of error none the less exist. Mistakes may even arise from an inopportune or

exaggerated application of phonetic laws (such as in *hyper-dialectism* or *hyper-urbanism*, discussed on p. 49). In the foregoing case it would lead to error, for instance, to attempt an a priori reconstruction of the Spanish word for fire along the lines of the correspondence between the latin *focus*, the Italian *fuoco*, and the French *feu*. The true form is *fuego*, and not *huego*, because initial *f*, in Spanish, does not change into *h* before *u* where there is a hiatus. The Gascon dialects go even further in this respect than Spanish ; they have *huek* for " feu " and change initial *f* into *h* in every position.[1]

The linguist's first consideration, therefore, must be to define exactly the conditions in which phonetic law applies, and its extension in space and time.

In fact, phonetic changes are limited in time. Once the change has affected all those words on which its action is possible, the law expressing that change becomes null and void. The language may recreate new combinations altogether similar to those previously affected by the change, but these combinations will now remain without modification. They are said to be no longer subject to the law. Thus all languages have doublets representing words from identical sources introduced into the language at different periods. The oldest forms can be recognized because thay have undergone greater modification due to the influence of phonetic changes which operated no longer at the time when the more recent forms were introduced. In French there are the words *avoué* and *avocat*, *loyal* and *légal*, respectively derived from the same Latin prototypes. When these second forms came into the French language by a different route, however, from the first, the phonetic changes which had brought about alterations in the earlier forms had long since ceased to be operative.

It happens likewise that the formulæ of correspondence established between certain languages are sometimes contradicted by forms that have been borrowed from another language. German has *ss* for the single or double medial *t* in English, so that they have *besser* instead of *better*, *wasser* instead of *water*. But the two languages have the same word in *butter*, and the German *Messe* is in English *mass* (as in Christmas, Lammas), both of which contradict the preceding law in different ways. The reason is that *butter* and *mass* (*Messe*) are both borrowed from Latin.

[1] Cf. Meillet, *Linguistique historique et linguistique générale*, **XLII** (1908), p. 5.

But even if we try to keep before us the conditions which determine the range and extension of phonetic laws and account for apparent exceptions as natural facts, we do not always succeed in avoiding all difficulties. Some of these are inherent in the method itself. Phonetic laws, in the first place, throw a limited amount of light upon the nature of the changes whose results they record; and, in the second, they are but the average of divers complicated processes.

The phonetic changes due to *substitution* must be distinguished from those produced by *evolution*. It is evolution, for instance, when one sound is spontaneously transformed into another by means of some normal innovation. In the French of the Île-de-France, for example, the long closed *e* of the Latin has successively become *wè*, then *wa* (written *oi* to-day, according to an old spelling which had already ceased to be the correct rendering of the pronunciation in the thirteenth century). In this part of France we pronounce as *lwa*, *rwa*, *pwar*, *lwar* what we write as *loi*, *roi*, *poire*, *loir*. This is the normal pronunciation in Parisian French. When we hear this pronunciation affected by people living far from the capital it is generally borrowed from Parisian speech, and is not due to any natural innovation in their own. The proof of this is often furnished by the local pronunciations themselves, which here and there preserve the pronunciation natural to them either under an older form or in certain special words. Thus in one provincial dialect we may hear *un lèr*, for *un loir*, side by side with *une poire*. It is the pronunciation of *poire* that is modified by imitation, that is to say, it is borrowed.[1]

The importance of borrowed elements in phonetic changes manifests itself in the make-up of all literary languages (see p. 271). Thus, when North German substitutes *ai* and *au* for the single sounds *i* and *u* it is due to borrowing; the change is not spontaneous. Similarly, when a Saxon, adopting the standard pronunciation of German, says *müssen* and *schön*, instead of *missen* and *schèn*, it is a change by substitution and not by evolution.[2]

The statement of the phonetic law, however, does not reveal the nature of the change. Additional testimony and special

[1] On the character of such borrowed pronunciations in patois, see Grammont, **VI**, vol. x, p. 293, and Terracher, **CXXIV**, Introduction.

[2] Poirot, **II**, vol. ix, p. 603; cf. Bremer, **CXLVII**, p. 11, and, for English, Storm, **CCIX**, p. 820.

inquiry are necessary for recognition of the geographical limits of normal and spontaneous changes, beyond which they are the results of substitution by imitation. It is probable that, in the history of the classic languages, when a phonetic law is formulated, including within its range the whole of an extensive area, facts of a dissimilar order are frequently attributed to the working of this law, owing to an unconscious confusion between substitution and evolution.

Many other causes of modification remain outside phonetic laws. When we say that the aspirate *h* or the spirant *w* (digamma) have disappeared from Greek, we sum up in one single statement an extremely complex evolution in which phonetics is not the only factor. We should consult M. Meillet's *Aperçu*,[1] and see the vicissitudes of pronunciation these two phonemes have undergone, and how political or social circumstances have contributed toward maintaining or restoring this pronunciation in certain dialects while eliminating it in others. In fact, although initial *h* has left no trace in the modern dialects of Greece, the history of its disappearance covers a considerable period of time ; it had ceased to be pronounced quite early in the Ionian dialect of Asia and the Aeolian of Lesbos, but we still find definite traces of its existence in the Christian epoch. A still greater time was required for the disappearance of digamma. Ionian and Attic lost it before the historic period, but in Laconia it was still pronounced at the time of the compilation of the lexicon in which Hesychius collaborated, and perhaps it has never completely died out in this region, for the present Tsaconian still seems to use it in saying *vanne* " lamb " (Greek *Fαρνίον*). It is true, none the less, that the general tendency of Greek and of all the Greek dialects was to eliminate *h* as well as *w* ; so that the linguist is justified in saying that this elimination, even if Tsaconian to-day forms the exception, is one of the phonetic laws of the Greek language. The formula thus arrived at expresses a linguistic tendency, and sums up a phonetic evolution which really comprises a number of factors differing according to time and place.

An examination of most of the great phonetic changes which characterize language would bring us to the same conclusion.

The phonetic laws formulated by linguists express only

[1] **XCIII,** pp. 24, 27, 167.

approximations in regard to both space and time. It is not all at once that a phonetic change takes place throughout any extensive area such as that where French, German, Greek or Latin are spoken. And yet we may say that French has changed the long closed *e* of the Latin into *oi*, or that the *ss*, in German words, has taken the place of the single or double *t* in English. In fact, if we were to take examples one by one from the dictionary, after eliminating, of course, all the exceptions due to borrowing, not a single one would remain to contradict the rule. For the historian of language who only examines results and whose survey embraces the general development of a language, the law is almost absolute. But he who observes the spoken tongue, and who travels over a sufficiently large area at a time when a phonetic transformation is taking place, sees the changes in an altogether different light. When he tries to fix the date of a phonetic evolution within a given space and time, he inevitably ends by limiting his attention to a single individual and comparing him with his ancestors and direct descendants.

By assembling the data furnished by the dialects of a single language at various periods in its history we obtain a regular curve for the evolution of each phoneme (p. 37). And, geographically speaking, likewise, we often observe, in a given area, a gradual phonetic modification, thanks to the fact that in proceeding from one village to another we pass through the intermediate stages of its evolution.

Modern Breton has a tendency to substitute *f* for the complex phoneme written *c'hw*. This phoneme comprises a spirant guttural surd followed by the semi-vowel *w* pronounced as in English. In the Northern Breton districts of Léonard this phoneme can still be heard quite clearly: *c'hwéc'h* "six", *c'hwero* "bitter"; in the south-west between Douarnenez and the Pointe du Raz, the same words are pronounced *fèc'h*, *fero*, with the French spirant *f* of *fève* or *faire*.[1]

Theoretically one can easily make out the different stages of development. The *c'h* must first have become a single aspirate, the rough breathing of the Greeks or the German *h*. We are familiar with this shift in other languages, and especially in German itself. At the same time the *w* tended to become a mere dentolabial spirant, and ended as a simple *v*. This change is

[1] J. Loth, **VIII**, vol. xviii, p. 238, and Vendryes, **I**, vol. xvi, p. 300.

equally well attested, and indeed it might be described as classical, since it has occurred in many languages, beginning with Vulgar Latin and German. Consequently, the old cluster *c'hw* became *hv*. And this cluster *hv* in its turn has undergone a change which might be anticipated. The breath of the *h* has interfered with the glottal vibrations and encroached upon the *v*, changing it into a surd *f*. Thus in Old Irish, the cluster *hv* (from *sw*, and not *c'hw* as in Breton) always gives *f*. The evolution of *c'hw* into *f* thus supposes several intermediate forms, all legitimate, responding to facts already stated elsewhere.

When we leave the Léonard district, and go toward Douarnenez by way of Châteaulin and Locronan, we find spaced out over the Breton-speaking area geographical areas corresponding to those linguistic stages which we have theoretically reconstructed. After a fashion, we can actually reproduce on the spot the history of the transformations that have taken place : we pass from *c'hw* to *hw*, then to *hv*, and so to *f* ; the geographical regions of these phonemes succeed each other by gradual stages. In general it is correct to say that the passage from *c'hw* to *f* is due to phonetic tendencies in modern Breton ; but in actual fact this change is completely realized only in one section of the territory, and presupposes a succession of complex processes of which the phonetic law gives no indication.

Exceptions to phonetic changes are inevitable. We have seen a few examples due to words having been introduced into a language when the " laws " that should have modified them were no longer operative. It is merely a matter of borrowing and of the date of such borrowing. In the history of all languages a large number of exceptions occur as a result of borrowing, that is to say, of external influences.

Many others are due to the internal influences which are summed up in what we call *analogy*. Analogy is the power of other words in a language to exempt any special word from the operation of phonetic laws, or to compensate it for changes those laws may produce. For example, it is a phonetic law in normal French for Latin *c* to become *ch* before an original *a*. We say *chien*, *chèvre*, *cheval*, *chantre*, for *canem*, *capram*, *caballum*, *cantor*. The word *châsse* has come directly from the Latin *capsa*. A borrowing from a southern dialect has given *caisse*, as a doublet for this word, introduced into French at a time when the law in question no longer operated. This is

one of those changes through external influences above indicated. However, when we consider the Latin *vincat*, subjunctive of the verb *vinco*, we expect to find a French form *vainche*. The actual form is *vainque*, because in this subjunctive we have re-established the occlusive by analogy with forms like the past participle *vaincu*, in which it is regularly preserved before *u*.

Analogy is perpetually correcting or impeding the action of phonetic laws. The regular development of phonemes is often obstructed by its action; and, indeed, an eminent etymologist, who loved to see order and clearness everywhere, declared that he sometimes "felt considerable annoyance at the ravages made by analogy".[1] As a matter of fact, there is hardly a phonetic process which is not more or less affected and disturbed by it. Often it is the meanings of the other words which exercise an influence, and cause those popular etymological accidents that are one of the "bugbears" of the phoneticians. We shall return to this subject on p. 180.

Here we must dwell also upon the phenomena of *hyper-urbanism* and *hyper-dialectism*.[2] Hyper-urbanism consists in those excesses brought about by consideration for correct speech and those who pride themselves on their elegant use of language. An Italian peasant wishing to speak the Latin of Rome, and knowing that the diphthong *au* in the language of the capital often corresponds to the long *o* in his own dialect, said *plaustrum* for *plostrum*, *cauda* for *coda*, *plaudere* for *plodere*. These are hyper-urbanisms. Etymologically, the *o* in these three words represents the older form. But the townsman also had a natural tendency towards hyper-urbanism owing to his fear of being considered provincial in his speech, and he readily adopted *plaustrum*, *cauda*, and *plaudere*. We know, in fact, that this pronunciation was in vogue in Rome itself, and probably used by the older Romans. The Senator Florus once charged Vespasian with saying *plostrum*, to which Vespasian wittily responded by addressing the senator: "Salue Flaure." Vespasian was right. *Plostrum* is the correct form; *plaustrum* is as much an hyper-urbanism as *Flaurus* would be.

In speaking a foreign dialect, one is exposed to mistakes due

[1] A. Thomas, **CXXV**, vol. iii, p. 32.
[2] H. Oertel, **CXXXVII**, p. 148 ff.

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to doubt as to the proper form of words. A frequent fault is that of being too correct, of erring through an excess of purism. This mistake was often committed by the Greeks when they tried to write in a dialect not their own. There are many hyper-dialectisms, for instance, in the Doric of the Pythagorean authors. As they (or their copyists) knew that Attic *η* often corresponded to long *α* in Doric, they changed into *α* many an Attic *η* which should have persisted in Doric as *η* : for example, *αἴσθασις*, *κίνασις*, *ἀμετάβλατος*, etc., found in the Pythagorean writers instead of *αἴσθησις*, *κίνησις*, *ἀμετάβλητος*. It is likely that at the time when the Greek dialects were fused into a common language, similar mistakes were frequent when people wished to write a pure dialect. Errors easily arose out of the medley of dialects, strewn with common forms, where it was often difficult to distinguish the real dialectal elements from the non-dialectal. Even people who had spoken a certain dialect from birth were liable to hyper-dialectisms.

In the preceding account we have pointed out instances in which regular phonetic tendencies came into conflict with tendencies of a different character. Such cases must have occurred often in the history of languages, and it is to them that we must attribute the irregularities found in all phonetic history. In particular it must often have happened that a nation changed its language and, consequently, that the same language was spoken by people of different nationality. Sometimes a conquering race imposed its tongue upon the conquered ; sometimes political or social conditions forced a people to adopt a neighbouring tongue. Hence certain languages have developed strange and rapid transformations, for the people who adopt a new language often keep the pronunciation peculiar to the language they have dropped. This is why Gaulish influence is found in the phonetics of the Vulgar Latin of Gaul. It is true that Romance philologists are not in accord upon this point.[1] It is certain, however, that similar phonetic changes are found in the languages of different races who are geographically contiguous, as in Livonian

[1] Meyer-Lübke, **CLXXXI**, p. 170. For the influence of Slavonic upon Rumanian, cf. Densusianu, **LXVI**, vol. i, p. 241.

(of the Finnish group) and Lettish [1] (Indo-European), Armenian (Indo-European), and Georgian.

Certain philologists have a tendency to exaggerate the influence of a change of language and to attribute to such processes the origin of the principal phonetic changes.[2] As a fact, spontaneous phonetic changes do take place as a result of a natural change in the system brought about and justified by use of the language itself.

The study of the development of languages enables one to distinguish, in a series of phonetic transformations, those that are due to foreign influences. The philologist who has set himself at the outset the task of mastering the phonetic system of a given language at any particular moment in its evolution, easily recognizes in the later history of the language the effect of the normal tendencies which existed potentially in the older stage.

Such a study promises results of general import. By comparing and co-ordinating the data furnished by all the languages whose history is known, the regular processes of phonetic transformation can be established. This work has not yet been finished. At the same time, any linguist who knows the phonetic history of several languages is already in a position to say with very little hesitation which is the older of two attested phonetic stages, and how the transformation came about.

[1] Jespersen, **CLXXIII**, p. 79.

[2] Cf. especially Gamillscheg, *Ueber Lautsubstitution* (*Prinzipienfragen der romanischen Sprachwissenschaft* (1911), pp. 162–91), and Delbrück, **CLIII**, p. 152.

CHAPTER III

The Phonetic Word and the Verbal Image

THE phonetic changes with which we have hitherto been concerned resulted from transformations of phonetic systems. The causes of alterations in sound units had to be sought in the relation of these phonemes to the system as a whole. Yet this type of change, is not the only one the linguist has to consider.

There are no isolated phonemes in language. This does not only mean that phonemes have no independent existence, and cannot be analysed separately except by a process of abstraction, since they constitute a system in every language ; it also means that they are not employed separately. We cannot speak simply in combinations of phonemes. The shortest sentence or word presupposes a succession of complex articulatory movements and their combinations, and out of these combinations arise reciprocal acts involving divers kinds of changes. The changes which affect phonemes because of their connexions with other phonemes of the same word may be termed contact changes. They are no less important in the history of the language than the preceding ones.[1]

Before, however, entering upon a study of these changes, we must first fix the limits of the phonetic group within which contact changes arise, or, to put it differently, we must define the *phonetic word*.

The question that confronts us here is two-fold ; it consists firstly in determining whether a sentence in any particular language, considered solely from the point of view of the phonemes composing it, admits of divisions perceptible to the speaker ; and secondly, whether these divisions coincide with psychical or grammatical ones.

To the first query we can answer unhesitatingly in the affirmative. It is not to be doubted that natural phonetic divisions exist in a given phrase. Such divisions, in fact, are of several kinds.

[1] Sievers, **CCV**, p. 377. A remarkable account of facts taken from the Slavonic is to be found in Broch, **CXLIX**, p. 185.

One of the most noticeable is the division into syllables. Every speaker is conscious of this, as mental pathology has proved.[1] Cases of amnesia have been observed in which the feeling for the syllable survives complete forgetfulness of the word. The patient can only designate objects by the number of component syllables in the word they represent. Without being able to express either *chapeau* or *tabouret*, he indicates with his fingers that the first of these words contains two syllables, and the second three. He has lost the memory of the articulatory movements necessary for pronouncing the word, but he still knows how many of them there are. It is true that we may not admit the testimony of such an experiment on the ground that there is here an element introduced by acquired habit, after the subject had learned to read, and that it is impossible to distinguish what belongs essentially to written language from that belonging to spoken language. Habits acquired by the hand which traces letters, and those acquired by the eye which perceives them, may, in fact, be confused here and disturb the proper co-ordination of facts.

We can draw more valid conclusions from versification. In a large number of languages metre depends upon the number of syllables, sometimes even in those where writing is unknown and where poetry was transmitted only by oral tradition. Thus in the early dawn of Indian and Greek literature, long poems were composed with a rigorous adherence to rule in the number of syllables, at least if we are to judge by the direct heirs of the rich Vedic poetry or the founders of the Lesbian lyric.[2] The beginnings of writing confirm this testimony. In phonetic writing, language was at first transcribed syllabically. Division into syllables preceded, and even retarded for a variable period of time, division into letters (see Part V). A long and careful analysis was necessary to distinguish the elements of a syllable. The first alphabets antedate this analysis ; they are syllabic.

Division into syllables even preceded division into words. In the oldest extant texts of many languages the words are not separated. The end of one word is combined, according to the rules of syllabic writing, with the beginning of the following word ; this is the case in the various Indian ancient writings.

[1] Cf. Rousselot, **CXV**, vol. ii, p. 969.
[2] L. Havet, **LXXX**, p. 166.

In Cypriote writing, which is syllabic, the Greek words *τῶν αἰλῶν, τὸν ἄργυρον* are written still as *to na i lo ne, to na ra ku ro ne.*

It would seem that division into syllables was first suggested when a writer wished to transcribe a phrase heard or pronounced. We know, indeed, what difficulty poorly-educated people have in correctly dividing words; and, on the contrary, what a feeling they have for syllabification. The latter appears to be more natural, while the former is merely conventional, and requires study and practice.

Nevertheless, it is by no means easy to define the term syllable.[1] Let us take the simplest case in which we have a series of alternating consonants and vowels—for instance, a group like the French *l'Académie des Beaux Arts*, pronounced *lakadémidébozar*. From the definition of consonants and vowels given further back, we can derive the principle here regulating the division of syllables. All the vowels require that the mouth shall be opened. This opening varies in size, but it is always larger than that demanded for consonants. In fact, certain consonants, the occlusives, do not require any opening at all. The others, which require an opening of the buccal cavity, are characterized by a frictional sound indicating that the opening is relatively narrow. A group of sounds, therefore, such as we have selected, represents successive opening and closing articulations which sometimes come very near complete closure. The wide openings correspond to the vowels and the closing articulations to the consonants. This fact is shown in striking fashion on a diagram made by a recording cylinder. By following the movements of the pen it is possible to read the syllabic division. The vowels describe the peaks of the curves, of which the fall marks the moments of closure constituting the consonants.

Very minute work is involved in marking the precise points where the syllables begin and end. M. Roudet tells us that syllabification presents three aspects according to the observer's point of view. "Every time we pass from one syllable to another," he says, "there is an abrupt variation which at the same time affects the regular course of expiration, the articu-

[1] These lines were already written before the publication of the *Cours* by F. de Saussure, **CXXI**, which contains, p. 64 ff. (notably p. 89), a highly original theory of the syllable.

latory motion and the auditive perceptibility." [1] This threefold variation permits us to determine the limits of the syllable in a certain number of cases. But in many others the division is arbitrary. It would be as puerile to attempt to fix this division as it would be to attempt to determine at what precise point lies the bottom of a valley situated between two mountains.

The definition of the phonetic word is hardly less arbitrary, for we often have syllables, and even groups of syllables, which we do not know whether to group as independent words or to attach to neighbouring ones. According to the language in question, this division is more or less clear-cut.

Accent ought to be a means of solving the problem. We have seen that the emission of breath from the tracheal opening is not always produced in an identical manner. The expulsion of air is not continuous, for the muscles controlling the passage of the breath sometimes speed up and sometimes retard the movement. Accordingly we have accelerations and diminutions of speed and stoppages greater or lesser in number, according to the language and the speaker. In other words, the spoken word contains within itself a rhythmic principle, with accented and non-accented beats. Just as we divide a musical phrase into measures irrespective of the melody, so likewise we can recognize in any spoken phrase, irrespective of its sense, a certain number of divisions less regular and more variable in measure, doubtless, than those of music, but equally dependent upon a periodic recurrence of accented beats. Language itself has rhythmic peaks and depressions.

These peaks have frequently a psychical value. It might almost be said that the muscular movements producing stress and pitch are sometimes determined by psychic causes. Accent seems to breathe life into the inert phonetic body. To borrow a metaphor from the old grammarians, accent is the " soul " of the word ; whether pitch or stress be affected, it gives the word character and personality. Nevertheless, accent does not suffice to define the word.[2]

In the first place, it but imperfectly defines the limits of the word. In certain languages the position of the accent is

[1] **CXIII,** p. 182.
[2] See Grammont's penetrating remarks on French accent, **LXXVIII,** p. 121.

clearly decided by the word-ending ; in others the accent falls upon the final or the penultimate syllable, and in others again upon the beginning of the word. But these cases do not exhaust all the possibilities ; there are tongues, indeed, in which the variable accent gives no indication of the word-ending. On the other hand, it may happen that there will be only one accent in a group of several words ; or, conversely, a single word may have two. Greek and Sanskrit prove that Indo-European possessed what are called enclitics, short words never used independently, but attached to the preceding word. In our modern languages, with stress accent, certain groups of words are pronounced with a single vocal effort and with an acceleration of breath on one syllable only. On the other hand, we know of Sanskrit words with two accents, and in languages which employ stress there often arises a secondary in addition to the principal accent.

Thus, no definite and constant relation between the accent and the word can be established. There are languages with pitch accent, for instance, where certain essential words have no accent at all, like the Sanskrit verb in several of its uses. However important the verb may be in a Sanskrit sentence it is generally atonic in the principal clause. Hence, we must not confound the independence, expressiveness, and accentuation of a word. In such Russian examples, as *ú morja* " near the sea ", *ná zemlju* " on the ground ", *pó gorodu* " in the town ", the noun is enclitic to the preposition.[1] On the other hand it will be noticed that the accent does not necessarily fall on the most important syllable of the word. In French, for instance, the accent is on the final syllable, that is to say, most often on formative elements such as suffixes, whereas the root is unaccented.[2]

All this necessitates our defining the phonetic word independently of accent.

In many languages the final syllable of a word, " tranche," to use the terminology of the French phoneticians, undergoes special treatment, distinct from both the initial and the medial syllables.[3] This is surely the best argument to use to prove the existence of the phonetic word. As Gauthiot has shown, quite

[1] Boyer and Speranski, **LIII**, p. 31, No. 2, and p. 91, No. 2.
[2] Jespersen, **CXXXIII**, p. 26 and ff.
[3] Gauthiot, **LXXIII**, pp. 34–5.

apart from the morphological value of the word, its length or accent, the terminal syllable as such is *weak*. This general principle of the weakness of final syllables varies in its application according to the language ; the weakness itself may be more or less. But in the applications of this principle we may find its own confirmation, for the results of this weakness are the more evident the more the word itself is independent and autonomous. Thus, the special pronunciation of final syllables is a function of the existence of the word, and defines its limits.

Having admitted the existence of the phonetic word, we may study the modifications produced in it by the reciprocal action of its component elements.

The very thing we have just been considering is one of those general facts which follow from the existence of the word as a phonetic unit ; it is an example of contact change. In Indo-European languages, the final syllable develops in a special way simply by virtue of being final ; that is to say, because of the position it occupies and irrespective of all other considerations. If in certain of these languages this general principle of the weakening of finals becomes somewhat attenuated, as in the case of exceptions permitting this or that final syllable to remain intact, it is partly because all languages have not maintained with equal precision the separate character of the final syllable, and partly because particular agencies have cut across the general agency by virtue of which final syllables become weak.

Thus, final *m* very early ceased to be pronounced in Latin ; but the word *rem* kept its nasal, a trace of which still exists in the French *rien*. This is because it is a short monosyllabic word, and because such words often resist alterations that are regular in long ones. Conversely, long words sometimes undergo special changes due to their length.[1] This is especially true of frequently used words which, because of their frequency, are understood even before they are uttered, so that the speaker comes to dispense with the necessity of completely articulating them, and contents himself with an abbreviation. Phonetic deterioration is then particularly marked. These words are generally accessory in their nature,

[1] Meillet, **VI**, vol. xiii, p. 26.

or else are ready-made formulæ in which the necessity to articulate clearly, in order to be understood, does not arise. In all languages there are particles, prepositions and conjunctions often derived from former independent words that have been transformed into grammatical auxiliaries (see p. 164). Thus, in modern Greek we have the particles *θά* and *ἄς*, one to mark the future and the other the subjunctive[1]: *χάνω* "I lose", *θὰ χάνω* "I shall lose"; *ἀγαπῶ* "I love", *θἀγαπῶ* "I shall love"; *εἶμαι* "I am", *ἂς εἶμαι* "That I may be"; *γράφω* "I write", *ἂς γράφῃ* "Let him write". The first goes back to *θὲ νά* which had already appeared in the thirteenth century, and is only a contraction of *θέλω ἵνα* "I would that"; the second is a contraction of *ἄφες*, which in ancient Greek is an imperative signifying "let" (compare English *let us go, let him write*). In both cases the contraction considerably transcends the normal phonetic rules of the language, and is explained by the grammatical character of the words affected.

We commonly say in French *wimsyœ* and *wimmzel* for "oui, monsieur", "oui mademoiselle"; and in Spanish *usted* for "vestra merced"; *gmoen* and *moen* for "guten Morgen" in German or *phyatdigot*, for "behüte dich Gott". These are irregularities. We are tempted to interpret them according to the theory of a "speech-tempo"; *wimsyœ*, *gmoen* would be the "allegro" forms, *oui monsieur*, *guten Morgen* the "lento" forms. But this interpretation does not satisfy us. It is true that the rapidity of utterance may vary in different languages; the French or English speak more rapidly than the Germans, and the North Germans than the South Germans. But it is not the case that the same word exists simultaneously under two forms in one language, and that either of them can be used at will according to the rapidity of the conversation. There really is a word *morgen* or *monsieur* which exists in thought, and a word *moen* or *msyœ* pronounced by the speech organs. And this represents the application of a phonetic tendency carried to an extreme. It shows how far the influence of a phonetic tendency will go if nothing interferes with it; in reality it is a form-limit.[2]

All the elements do not have an equal value within the phonetic word. Some are strong, and some weak; some

[1] Pernot, **CIX**, p. 125, § 236, n. 1.
[2] Vendryes, *Réflexions sur les lois phonétiques*, in **XCIX**, p. 122.

dominate and some are dominated, some offer resistance to destructive influences, and some succumb rapidly to them.[1] Dominance and resistance are the two essential factors whose limits and causes must, above all, be determined by every historian of language for the phonetic system under analysis. The phonetic structure of each language, in fact, admits of particular dominances and resistances. The special phonetic evolution of each language results from the equilibrium established between the claims of various rival phonemes. Apart, however, from the phonetic agencies peculiar to each language, certain general agencies manifest themselves in all languages, being the expression of natural tendencies, both physiological and psychological. Furthermore, whereas the phenomena studied in the preceding chapter always resulted from some special alteration in the linguistic system of the language where they were produced, even when they were produced in more than one language independently, those with which we are now dealing are due to general agencies whose active principle dominates the conditions peculiar to each language.

There is a difference between the implosive and explosive element in occlusives ; the first is not so evident to the hearer since it is weaker in its articulation than the second. This exposes implosion to fortuitous variations. A cluster like *akta* has an implosive *k* which is less resistant than the explosive *t* which follows it (see p. 23). Two opposing tendencies may operate, the result of which will be a modification of the cluster. Out of sheer laziness, the speaker may omit to articulate the *k*, and immediately after the implosion bring the tip of his tongue to the position for *t* ; the final result will be *atta* with a long *t*. This process is visible in Italian, where the Latin words *actus*, *strictus* have become *atto*, *stretto*. Or, again, in his desire to do justice to *k* the speaker may follow the implosive *k* with an explosion articulated lightly at the same point before passing on to the *t* explosion. This is the pronunciation often heard among French people who pride themselves upon their correctness : it may be witnessed in the writing of *faqueteur* for *facteur*. Short as the explosion of the *k* may be, it has, as a matter of fact, a fatal effect upon an embryonic vowel, for instance, the reduced and suppressed vowel called mute *e*. In the first case *accommodation* [2] takes place, in the second case *epenthesis*.

[1] See Juret, **LXXXVI.** [2] Vendryes, **VI,** vol. xvi, p. 53 (1909).

There is yet a third possibility, that the two contiguous phonemes, instead of adjusting their elements to the point of increasing the resemblance between them, sometimes to complete identification, or even of mutually protecting themselves by the introduction between them of a sort of buffer phoneme preventing reciprocal reaction, take advantage of their differences to exaggerate them until they no longer have anything in common. This is the process of *differentiation* [1] as opposed to accommodation. Thus, again using the example of the cluster *kt*, we have languages like Iranian and Celtic, where the first occlusive has become a spirant, and finally *-cht-*.

The nature of the change, be it accommodation, epenthesis, or differentiation, is determined by the general conditions of the phonetic system of the language. The three processes frequently come into play in the elimination of groups difficult to pronounce.

It is usually for physiological reasons that languages eliminate these special phonemes or groups of phonemes. Difficulty and ease of pronunciation are purely relative conceptions, doubtless quite definite to the speaker, but variable for each language. We cannot appreciate them without a thorough knowledge of the structure of the language. In fact articulatory habits are at the root of the difficulty, so that a sound-group which one people find difficult to pronounce may be quite easy for a neighbouring people.

There are, however, certain groups of sounds which, in a general way, are naturally difficult to pronounce owing to the normal structure of the vocal organs. They may be described as unstable clusters. Whenever circumstances combine to bring these into a language we may be sure that that language will manage to get rid of them. The method of elimination, however, will vary.

Thus, for example, the group *tn* is unstable. In a form like *atna*, the point of articulation of the *t* being the same as that of *n*, the tongue has no need to move between the two *a's*; a single movement of the soft palate setting up glottal vibrations constitutes the difference between the *t* and the nasal. It is a very delicate arrangement demanding precision. It is possible to do this when the word has taken on a literary form like *Etna*. It is a known fact that proper nouns often resist phonetic

[1] Meillet, **VI**, vol. xii, p. 14 ff. (1901).

alterations due to contact changes better than other words. In most common words, however, the unstable group *tn* will somehow be eliminated. Sometimes this will be effected through accommodation ; the soft palate is lowered from the beginning and at the same time the vocal chords continue to vibrate without interruption between the two *a's*. The result is *anna* (as in the Latin *annus* compared with the Gothic *apns*, both derived from an older *atnos*). Sometimes differentiation takes place. It may affect either the occlusive or the nasal, according to circumstances. In order to avoid a position of equilibrium which is difficult to maintain the tongue will exaggerate the difference between the two phonemes, and the result will be either *akna* (as in Umbrian, where the form corresponding to the Latin *annus* is *akno*) or *atra*, as in certain of the Celtic tongues, and especially in Breton where *traon* " the bottom, the valley " comes from a much older *tnaon*. Lastly, there is a third process of elimination which consists in epenthesis. As it is the juxtaposition of *t* and *n* which causes the difficulty in pronunciation, this difficulty is got over by introducing a vowel between the two ; for example, the Welsh *tyno* (pronounced *teno* with the French mute *e*) corresponding to the Breton, *traon*.

In the preceding instances we dealt only with the question of phonemes in contact with each other ; but equilibrium and reciprocal interaction may similarly affect phonemes separated by many intervening sounds, even phonemes belonging to two different syllables and occupying positions far apart in the phonetic word. The processes that may then take place are *assimilation*, *metathesis*, and *dissimilation*.[1]

We say there is *assimilation* between two separate sounds when one borrows from the other a single or several elements to the point of complete fusion. Most often the phoneme assimilated precedes the one to which it becomes assimilated, that is to say, the action is anticipatory. The speaker, preoccupied in an endeavour to pronounce a certain phoneme coming in the middle of a phonetic group, utters the sound earlier than he should, and produces the desired articulation

[1] See Grammont, particularly **LXXIX**, also his numerous articles on metathesis in different languages, notably **VI**, vol. xiii, p. 73 ff., and **CI**, p. 179. See also Pernot, **CVIII**, p. 540.

twice in succession. Generally the assimilated phoneme lies near enough to the other to make the mistake clear. Thus, instead of *pequo* "I cook", the ancestors of the Latins said *quequo*, from which comes the *coquo* of classical texts. But assimilation may act in the inverse order; for example, in popular French, we have *juchque* for *jusque*, which is merely the substitution of a breathed palatal for a sibilant without alteration of voicing.

Metathesis originates in the same way as assimilation—through misunderstanding and lack of attention; but the result is altogether different. Instead of repeating the same articulatory movement, the speaker merely inverts two movements. Metathesis eventually appears as an interchange of the consonant or vowel lying between two syllables of the same word. So that instead of *festra* "window", the Portuguese say *fresta*; instead of *debri* "to eat", certain Breton dialects say *drebi*. The old Greek word κάτοπτρον "mirror" became κάτροπτον.

Finally we have *dissimilation*, a reverse process to assimilation, which consists in making only once an articulatory movement, which ought to be made twice:[1] thus, from the Latin *arborem* we have the Spanish *arbol* and the Provençal *albre*. In both cases, in a reverse order, the movement demanded for the production of *r* was not effected twice, but only once, and a second time a different movement was adopted, resulting in the production of the liquid *l*. It also often happens that dissimilation simply entails the disappearance of the phoneme altogether. Thus, in old Greek we have δρύφακτος, "wooden barrier" from δρύφρακτος.

The order in which these three processes take place is determined by special causes which the linguist ought to note carefully in each case. Stress accent is one of the causes governing the sound arrangement in both metathesis and dissimilation. But we must also take into account the character of the phonemes, and their respective positions within the word.

Contact changes do not bring about new phonemes. Thus, dissimilation never creates phonemes foreign to the language in which it is operating; "If the normal action of dissimilation results in the production of a new phoneme, one of two things

[1] In addition to Mr. Grammont's comprehensive book, see K. Brugmann, *Das Wesen der lautlichen Dissimilation*, Leipzig (1909).

happens ; either the unusual phoneme is instantly replaced by its nearest equivalent in the language, or, if substitution would prove to be too difficult, or the nearest equivalent too far away, the phoneme or group of phonemes remains intact " (Grammont). In such a case dissimilation does not take place ; or rather, if it does take place, it is in the opposite direction. The unconscious feeling that he is being called upon to pronounce something unpronounceable maintains the speaker's tendency to dissimilation, upsets the word arrangement and bestows on the phoneme that should have been dissimilated an additional force which re-establishes equilibrium in its favour ; the dissimilation is said to be reversed.

It is for a psychological reason, likewise, that dissimilation does not take place, or changes its direction if the etymology of the word is evident to the speaker. If he has the proper etymological feeling only for that part of the word which should have undergone dissimilation a reverse dissimilation generally results. If all the parts of the word are at once etymologically clear there is no dissimilation at all. Sometimes it is the suffix which is strongest, sometimes the radical. Thus, the word *pruneraie* when dissimilated should become *pluneraie* in French, but as the radical *prune* is the stronger we get the form *prunelaie*, and this has been favoured, moreover, by the existence of the word *prunelle*. In such a case as the Spanish *sombrero* " hat ", or of the Greek ἀνδροβόρος " man-eater ", there has been no dissimilation because the syllabic elements to which the two *r's* belong are both equally important to the speaker. M. Grammont has brought all the facts of dissimilation within a single law ; the strongest phoneme dissimilates the weakest. When they are of equal strength both persist.

Thus, we are introduced to a struggle between dominance and resistance. This struggle is confined to the vocal organs. It is true that within the phonetic structure of each language there are elements that are stronger than others (cf. the preceding chapter), but here the respective strength of the different elements in question resides primarily in the brain. Alterations in sound continuations are the result of a lack of coordination between the concept and the vocal organs. They are due to a lack of attention. Sometimes this attention is exaggerated and is concentrated excessively upon one point to the detriment of others, or else it is unequally distributed

among the different elements which compose the word; at other times, on the contrary, it turns aside and abandons the organ to its natural laziness.

In order accurately to appreciate the value of these changes we need a very detailed knowledge of general phonetics and the phonetic system peculiar to each language. We also need to be able to relate a change to the psychic process responsible—for in the last analysis the cause of such a change is in the mind of the speaker.

This conclusion invites us to say a word about the relation between word and thought. Although the question is primarily a psychological one, the philologist cannot afford to disregard it.[1]

When we hear a foreign tongue spoken of which we are ignorant our ear perceives something made up of shorter and longer groups of sounds with intervals of silence. If we understand the language, these sound-groups perceived by the ear awaken in our mind corresponding groups of representations each of which constitutes, grammatically speaking, a sentence. Sounds and sentences, therefore, are the two realities which a summary analysis of language first recognizes, the analysis being founded upon the different impressions produced upon our intelligence by a language we do not understand and one we do understand.

It is quite true that we do not express by sounds all the images present in our mind. Thinking, for example, does not require the exercise of the sound organs; but thinking is really an inner language in which the sentences are linked together just as in articulate speech.[2] And each of the sentences formed in thought contains, in full force, all the articulations of speech. Thought progresses along the lines of sound, even when no sound is expressed. At times, indeed, we unconsciously give vent to our thoughts in their corresponding words. It almost seems as though thought weighs too heavily upon the speech-organs and involuntarily starts the mechanism, like a

[1] Cf. especially B. Erdmann, "Die psychologischen Grundlagen der Beziehungen zwischen Sprechen und Denken" (*Archiv. f. system. Philosophie*, vol. ii (1896), pp. 355–416), and Mauthner, **CLXXVIII**, vol. i, pp. 164. An extensive bibliography on this question will be found in van Ginneken, **LXXVII**, *passim*.

[2] V. Egger, *La parole intérieure*, Paris, 1881.

clumsy or imprudent person who examines a piece of machinery, and does not confine himself to imaginary experiment but actually sets it in motion.

We must allow the psychologists to decide how far the potential phonetic action is necessary to mental speech. Such a necessity is assuredly the result of habit and is not imposed by nature. It may be insisted, however, that the thought of a deaf mute is different from that of a normal person. The form in which we express ourselves imprisons thought in such fashion that it no longer has an independent existence, and is incapable of being separated from the sounds that embody it, or even from potential sounds when no such materialization has taken place. The fact that organs may function aimlessly, without the influence of thought, does not contradict this assumption. If we try to utter a series of varied sounds with no meaning we never achieve such great variety as when we are engaged in the articulation of a thought. We generally limit ourselves to reproducing groups of sounds which exist in the language, that is, sounds which the organs are already accustomed to produce, and are currently used with their meaning content..

The psychic unity which precedes the word may be called a *verbal image*. It is at once a representation elaborated by thought with a view to its expression in language, and an ensemble of potential sounds—all ready to be expressed. The verble image is two-faced, one side directed toward the depths of the mind and the other reflecting the mechanism of sound production. Considered in its material realization it translates itself by sounds, but in its psychic origin it is a product of a mental process. It thus unites the two aspects of the dualism we predicated above and is common ground for the linguist and the psychologist.

To psychologists [1] the verbal image is a complex product resulting from the superposing or association of four images, oral, auditory, visual, and manual. This fourfold differentiation is very old ; it was already assumed by David Hartley in his *Observations on Man*, written about 1740. We know what an important place it took in the works of the Charcot school. Charcot taught that every word was made up of the association of four images, grouped in twos as the sensory images (auditory and visual) and the motor (oral and manual)

[1] Cf. Dagnan-Bouveret, **X**, vol. xvi, p. 466 ff.

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or, by a rearrangement of the same factors, phonetic images (auditory and oral) and graphic (visual and manual). This definition can be defended inasmuch as it does not apply to the " word " but to the verbal image (cf. p. 69). In any case the analysis of the verbal image is only of minor interest to the linguist. The conditions of cerebral activity, which are the main business of the psychologist, remain outside the field of the linguist.

We may here regard the verbal image as a whole whose parts escape us. At least two of the elements recognized by the psychologists, namely, the visual and manual image, cannot be considered at all, since they are connected with written language. To the person who can neither read nor write verbal and auditory images are the only ones that come into play. At the very beginning of the first chapter, however (see p. 20), we gave reasons for reducing these two to one.

At the same time we have no concern with the differences which arise in the genesis of verbal images. We may suppose them to be definitely formed in the brain of the adult speaking his mother tongue. We are dealing, of course, with the normal language of the adult as he uses it after an apprenticeship in early childhood.

Each child must create his language for himself ; consequently verbal images which, after all, are only facts of experience transmuted in the brain into linguistic possibilities, must be gradually acquired and developed by the child. We cannot properly visualize the stages of this acquisition by considering the manner in which we acquire a foreign language at an adult age, for in the initial stages of learning a strange language we refer everything to our mother tongue. We proceed by substitution and try to find equivalent terms by storing up in our memory the words and sentences of the tongue we are learning side by side with those of our own language. Moreover, this first stage is often entirely bookish. It deals with written words and takes as its foundation a certain more or less artificial grammatical structure. A totally different process takes place in the brain of the child. He hears those about him utter complete sentences corresponding to the expression of certain commands, needs, or simply certain facts : " Will you go away," " I am hungry," " It is a fine day," etc. All of this, stored up in the brain, gives rise to as many

verbal images which become more exact as they increase, for, by means of substitutions to which the mind of the child quickly accustoms itself, these images become capable of representing an infinite variety of things, ideas, and feelings, and of being coloured by every shade of thought. When his apprenticeship is ended the child is in possession of a set of fully developed verbal images which spring up spontaneously in his brain, ready to find expression in language, as soon as he has to give a command, to express a need, or state a fact. The intellectual effort required to give birth to the verbal image rapidly becomes so simple and so familiar that the child is no longer conscious of it, and the formation immediately follows the sensation of need or an impulse of will, which is itself immediately followed by its linguistic expression.

During his enforced apprenticeship the child has to go through complicated exercises. He accustoms his organs to reproduce sounds that he hears. But he never hears isolated sounds ; they come as an *ensemble* endowed with meaning, so that he learns both to adapt his organs to diverse positions corresponding to the different phonemes, and to attach a certain meaning to the groups of phonemes thus emitted. All these sounds do not possess the same importance ; some dominate the others as we showed in the study of phonetic transformations. But the intellectual elements, which constitute the matter of which the phonemes are the formal expression, admit also of degrees of predominance. There are, for instance, some which stand out and attract the attention with greater clearness than others. As a result, even with regard to their component elements, verbal images are built up by a series of impressions added one by one to the first hopelessly incomplete experiment. This first impression takes note only of such characteristics as correspond to the dominant in the phonetic, as in the intellectual realm. It is only very gradually that the secondary characters and finally the most minute details succeed in figuring in this image.

However long the period of apprenticeship before the verbal image is finally formed, and whatever the stage of development in which it is conceived, its distinguishing characteristic, in the eyes of the linguist, is its unity. All the elements of which it is composed are fused into a single act, the fundamental linguistic, beyond which the linguist has no means of penetrating.

When the child says " no wan-supper ", meaning that he does not like his broth or supper, or that he will not eat it, the verbal image in his mind dictating the expression of his sentence is a well-co-ordinated whole, though still rudimentary. Later on, when he is grown up, he will say " I will not take any supper " (or soup), or " I would rather not have any ", or " I would much rather not have soup ". The verbal image at the root of each of these sentences is richer and possesses more shades of meaning than that of the child's sentence. Both, however, have the same unity.

We can then define the *sentence* as the form in which the verbal image is expressed and understood through the medium of sounds. Like the verbal image the sentence is a basic element in language. Two people talking to each other exchange sentences. We learn to speak in sentences and think in sentences. The verbal image may be extremely complex ; the sentence lends itself easily to the most varied expressions and is a most elastic element. Certain sentences consist of a single word : " Come ! " " No ! " " Alas ! " " Hush ! " Each of these expresses a meaning complete and all-sufficient in itself. But the sentence has exactly the same dimensions as the verbal image ; it is not even limited by phonetic capacity, since a single breath is often inadequate for one sentence, and it may happen that one and the same sentence will comprise two or more breaths. The mind dominates the play of the organs, and is no more hampered by their insufficiency than the execution of the flautist or oboist should be by the necessity for taking breath. The sentence admits of all degrees of expression from the crude articulations by which the child formulates a need, to the complicated period, well-balanced and harmonious, which clothes the thought of a Demosthenes, a Cicero, or a Bossuet.

From this definition it becomes apparent that the sentence completely covers the verbal image ; both are limited only by the power of the mind to form combinations. Hence, we must give the verbal image a rather larger range than is usual and not limit it to the single word. There is only this difference between the two, that the sentence is a concrete reality and therefore subject to all the accidents that realization entails. The potter who puts a piece of porcelain into the kiln is never certain of the result of the firing ; there is always the possibility that the fire will either be too hot and burn the clay, or

too weak and fail to bring out the colour. In the same way the verbal image prepared in the brain cannot pass through the speech organs without risk of accident.

Perhaps an example will make this clearer. I imagine that someone is pricking me involuntarily, and I cry out : " Ah ! you have pricked me ! "

The succession of acts is easy to reconstruct. A sensation of pricking is transmitted to the nerve centres, promptly evoking a verbal image which is immediately translated into the above sentence. The succession is so prompt that the cry immediately follows the prick. We call a verbal image that form given by thought, in virtue of acquired habits, to the cry which I have uttered. It would be different in a language without active verbs, which express action passively : " I—pricked by you " (see p. 104). The difference between the two verbal images is often simply the difference between the two languages. For example, the German says " Ich bin es " where the Frenchman says " C'est moi ". Here the verbal images are differently combined. The " Ah ! tu m'as piqué ! " (You have pricked me !) corresponds to the verbal images of the normal Frenchman. Let us imagine, however, that I have made a slip ; and that I said " Ah ! tu m'as quipé ! " making the sort of consonantal transposition commonly known in English as a " Spoonerism " (German, " Schüttelform ").[1] The verbal image, however, has not changed. If it is imperfectly realized in speech it is only because a mistake in execution has been made. The sentence uttered does not correspond to the image formed ; the error arises during the conversion of one into the other.

There are, of course, instances in which the verbal image is itself responsible for the error committed. Although I may know my friend Durand very well, in the course of conversation I may call him Lebrun, which is the name of another of my friends. This is no longer a material mistake to be imputed to the speech organs. A man of the people would say in such a case : " *Je ne sais pourquoi j'avais Lebrun dans l'esprit* " (I do not know why I had Lebrun in my mind). And in actual fact the wrong name has insinuated itself right into the verbal image, formed by the mind. The difference is obvious.

[1] Meringer and Mayer, **CLXXX.**

In short, the verbal image and the sentence are composed of the same elements, and these elements are what the grammarian is accustomed to call words. In this chapter we have studied the phonetic word; but in the current grammatical sense this phonetic word or unit may contain several "words", and may even have limits more or less clearly defined according to the language. In order to define the "word" more completely, we must analyse its elements from the grammatical point of view. This will be the object of the following chapter.

PART II

GRAMMAR

CHAPTER I

Words and Morphemes

EVERY sentence contains distinct elements of two kinds: on the one hand, the expression of a certain number of precepts representing ideas, and on the other, the indication of certain relations existing between them. If I say *the horse runs*, I have two ideas in my mind, a horse and running, and I unite the two in the statement *the horse runs*. If I say *Peter's house is large*, the ideas of a house, Peter, and largeness in my mind are similarly combined in the statement which constitutes my sentence.

It is well to realize that we accept facts as language presents them to us, that is to say, that we think of verbal images in the form in which language clothes them. This is the meaning to be attributed to the idea above expressed, "We think in sentences." We suppose that by virtue of certain unconscious habits the mental act which unites a word and an object (the horse, in this case) takes place in the brain, together with the act that connects this object with an action, and which restricts the action within certain time limits, when we say *the horse runs*.

This mental act supposed by language includes two successive operations: a process of analysis, in which after the image has been formed, the mind distinguishes a certain number of elements between which it establishes a connexion (here *the horse* and *running*), and subsequently a process of synthesis, in which these different elements, recognized and analysed by the mind, are combined anew to form the verbal image. Synthesis alone concerns the linguist. But this is of paramount interest, for from the different forms of this operation of synthesis result the differences in the structure of languages.[1]

Let us suppose that different human brains receive in equal degree the same visual impression of the running horse; and let us admit, although this may not be a safe inference, that they analyse in the same way the elements forming this

[1] Finck, **CLXI**, p. 4.

representation, and establish exactly the same connexion between the horse and the running. The expression of this connexion would take a particular form in each language ; the verbal images will be differently combined. The distinctions postulated at the beginning of this chapter is not, therefore, a purely theoretical one. It corresponds to what we may call morphemes and semantemes.

By *semantemes* we understand the linguistic elements which express the ideas of the concepts (*répresentations*) ; in this case, the idea of the horse, or the idea of the running ; and by *morphemes* we understand those elements which express the connexions between the ideas. Here, the fact of the running which is connected in a general way with the horse, is referred to the third person singular indicative. Morphemes consequently express the relations established in the mind between the semantemes. The latter are only the objective elements of the concept and will be separately considered in the section of the book devoted to vocabulary.

The morpheme is generally a phonetic element (a sound, syllable, or even several syllables) indicating the grammatical relations between the ideas in the sentence.

In a Greek sentence such as *Βωμὸν καλὸν ἀνέθηκεν Σιμωνίδης*, " Simonides raised a beautiful altar," it is easy to recognize that side by side with the syllables expressing the fundamental ideas of the sentence (Simonides, to raise, altar, beautiful), there are other syllables whose entire function consists in indicating that the quality of beauty belongs to the altar, and that it is Simonides who at some past time performed the action of raising the altar in question. The first of these syllables are the semantemes and the second the morphemes. Or take French groups of words such as *pour donner, je donne, tu donnais, la donation, des donateurs, au donataire.* Analysis clearly perceives a permanent element, the syllable *don*, connecting all these words with the idea of giving. But there are also in these groups a certain number of phonetic elements which serve to indicate whether we are dealing with a verb or a noun, of what kind, and to what grammatical category (gender, number, person) the words belong, as well as the relation uniting them with the other words in the sentence. These elements are morphemes.

Some of them have no independent existence, and to discover them the word must be analysed. They are called suffixes or formative terminations. Others, like the pronouns or articles in French, are separated from the word in writing. This difference, however, is unimportant here.

If we introduce into the Greek sentence given above the word ἄν between the object and the verb : βωμὸν καλὸν ἄν ἀνέθηκεν, the meaning is immediately changed ; this ἄν is a morpheme which gives to the sentence a particular hypothetical shade of meaning. Added to the aorist ἀνέθηκεν it serves to express a hypothetical subjunctive mood. The meaning thereupon becomes : " He would have raised a beautiful altar." Similarly in Sanskrit, the addition of the two syllables *iti* to any sentence implies that that sentence is a quotation ; *iti* is a morpheme. Colloquial French possesses a similar form in *quidi* (masc.) or *quèdi* (fem.). Compare the French sentences " Tu as tort " and " Tu as tort, quidi ", and you instantly feel that the first belongs to direct discourse, and the second is part of a story, and has a narrative character.

It matters little in what order the morphemes are introduced into the word or sentence, what place they occupy or the range or importance given them in the language. We place in the same category the augment ἐ-, the suffix -σ- and formative -εν of the Greek ἐποίησεν, " he has made," and the first two syllables of the French *il a fait*. These elements, so different in origin, all play the same part in their respective languages.

It matters little whether the morpheme is inflected or not. In literary Arabic *kana Zaydun yaqtulu* simply means " Zaid killed ". In fact, in order to mark duration in past time the Arabic imperfect precedes the substantive verb and both are inflected : [1]

1st person singular	*kuntu aqtulu*
2nd person singular masculine . . .	*kunta taqtulu*
2nd person singular feminine . . .	*kunti taqtulinā*
3rd person singular masculine . . .	*kāna yaktulu*
3rd person singular feminine . .	*kānat taqtulu*, etc.

The two forms are always felt as a unity by the mind, although a word may be placed between them. The first is a simple morpheme.

[1] Brockelmann, **CXLVIII,** vol. ii, p. 509.

It matters little, in fine, whether the morpheme consists of a single phonetic element or of two that are separate. There are morphemes which result from the mental combination of two isolated words, which none the less have an indissoluble unity. In French, negation is expressed by two elements which are seldom juxtaposed in the sentence: *je ne mange pas*, however, has as much unity as *οὐκ ἐσθίω* in Greek or *nitoimlim* in Irish.

Thus this first category of morphemes, whether single or multiple in form, is expressed by means of phonetic elements introduced into the sentence and joined to the semantemes.

A second category comprises those which are inherent in the nature or character of the phonetic elements of the semanteme. This is a more subtle category than the preceding but not less important linguistically.

The best example of this category is furnished by the vocalic ablaut of Indo-European and Semitic. This is not a case of a phonetic element added to a semanteme in order to give it a morphological value. It is simply by means of the phonetic elements of the semanteme that the morphological rôle of the latter is indicated. Thus, in English *men* or *feet* become the plural of the singular *man, foot*; *held* or *struck* are the participles opposed to an infinitive *hold, strike*. The difference lies in the vowel timbre, which really plays the part of a morpheme since it indicates, by itself, the morphological value of the word. The same is true of German, where *wir gaben* "we gave" is opposed to *wir geben* "we give" and to *gib* "give" (imperative). It holds likewise for Middle-Welsh where the plurals *brein, myr, wyn*, are opposed to singulars *bran* "raven", *mor* "sea", *oen* "sheep". Vocalic ablaut was also an essential morphological element in the oldest Indo-European tongues such as Greek or Sanskrit. We may indeed say that in Indo-European the morphological value of each word was more or less completely defined by the timbre of the radical vowel. This was the case likewise in Semitic languages, as we may gather from the modern Arabic; *himar* "donkey" takes a plural *hamīr*.[1] This process is so much in vigour that it has been extended to words recently borrowed from Spanish or French: *resibo* "a receipt", plural *ruāseb*; *bābor* "a steamboat", plural *buāber*; *chanbīt* "a parish constable", plural *chuānbet*, etc. This is the so-called "broken" or "internal" plural.

[1] Brockelmann, **CXLVIII**, vol. i, p. 431.

The term " internal inflection " indicates that vocalic ablaut plays the same part as a flexional element added to the word. In fact, in English as in Welsh, the plural of nouns is generally formed by the addition of a particular formative : English *boot*, plural *boots* ; *loss*, plural *losses* ; Welsh *penn* " head ", plural *pennau* ; *coed* " wood ", plural *coedydd*, etc. In Arabic, feminine nouns form all their plurals by the addition of a formative. Similarly, in German the preterite differs from the present by the use of the affix *-t-* : *ich rede* " I speak ", pret. *ich redete* ; *ich lebe* " I live ", pret. *ich lebte*, etc. In comparing these with the preceding examples we see that vocalic ablaut and inflection are two equivalent types of morphemes.

Accent is also a very important morpheme. In certain languages it helps to define the morphological value of the word. By accent we here generally mean pitch accent, i.e. tone. In Greek and Sanskrit—and the testimony of these two languages is borne out by several others belonging to the same family, such as Lithuanian and Slavonic—tone is as much a characteristic element of the word as a suffix or a formative. Certain forms, identical in all other respects, often differ only in tone ; it is tone which in Greek makes γράφειν " to write ", or πένεθαι " to grieve ", denote the present ; ταμεῖν " to cut ", or γενέσθαι " to be born ", the aorist ; it is tone alone which distinguishes τόμος " cut ", from τομός " cutting ", and marks the difference between active and passive in Greek compounds like πατροκτόνος " who kills his father ", πατρόκτονος " killed by his father ", etc. The part played by tone is all the more remarkable because Indo-European languages, with their exceedingly rich morphology, possessed various ways of expressing the relation between words themselves, and the part such words played in the sentence.

In the languages of the Far East where grammatical elements are few, one can very well understand that tone plays a still greater part. These languages have very skilfully utilized for morphological endings, all the elasticity, range, and variety of tones which their phonetic system admits.[1] The same fact can be observed in certain African tongues.[2] Thus, in *Ful* it is the intonation which expresses negation. A group like *mi warata* signifies " I will kill " (used for the present

[1] Cf. for Annamese, Grammont, **VI**, xvi, 75.
[2] D. Westermann, **CCXXI**, p. 37 ff.

" I kill"), if the final *a* has the same tone as the rest of the sentence ; but " I will not kill ", if the final *a* is pronounced on a higher note. The raising of the voice here has the value of a morpheme.

In connexion with the morphological value of tones, it must not be forgotten that one important element in certain languages is the zero tone, that is to say, the absence of tone. In Sanskrit, for example, the verb is tonic or atonic according to its particular use in the sentence. Naturally, therefore, in these respective functions, the verb is as clearly characterized by the absence of tone as by its presence.

This constrains us to add to the morphemes already indicated, a still more subtle type, but no less expressive than the others, and which we may term the athematic morphemes. These play a considerable rôle in morphology. Their value lies primarily in contrast, but it is no less great for all that. In music the pauses are often quite as expressive as the melody in which they occur, and whose development they break. In conversation, too, there are eloquent silences. In language the athematic is as much a morpheme as any other. In Indo-European there were certain substantives whose nominative singular admitted of no formative, which were, in other words, athematic. This absence of formatives, by contrast with the varied ones characterizing other substantives, suffices to distinguish the nominative forms in question. There was even one case in Indo-European which was always characterized in this fashion, at least during the earlier period—the vocative. And this peculiarity is also encountered in a verbal form akin to the vocative, the second person singular imperative. In the vocalic ablaut of the Indo-European or Semitic languages, therefore, the zero stem plays just as important a part as the others.

We come, finally, to the last category of morphemes, which are even less concrete than their predecessors. They consist merely in the respective positions occupied by the semantemes in the sentence.

When in Latin we say *regis domus*, the possessive relation uniting the two words is expressed by case-inflection and the *désinences* indicate the rôle played by each of these words in relation to the others. In the French phrase *la maison du roi*, the particles *la* and *du* are grammatical auxiliaries fulfilling

the same function as the Latin *désinences*. There is, further, this difference between Latin and French, that the word-order is much freer in the former ; we can say almost indifferently *regis domus* or *domus regis*, while in French the inversion *du roi la maison* is now scarcely admissible except in poetry. Nevertheless, even if this inversion appears somewhat strange, it does not disturb the meaning, and the relation between the two words remains intelligible. But there are languages in which, on the contrary, such a relation is expressed simply by the respective positions of the words ; for example, in Welsh we have *ti brenhin* (from *ti* " house " and *brenhin* " king "), the possessor always being placed after the thing possessed ; or in Chinese, *wang tien* (*wang* " king " and *tien* " house "), where the thing possessed always occurs after the possessor. In these two languages the dependent relation is not expressed by any external sign ; it is only indicated by the word-order, which is consequently unchangeable. In languages which have lost their case inflection, the relations expressing case are generally rendered either by means of auxiliaries (prepositions, articles, etc.) or by the respective positions of the words (cf. p. 141).[1]

When in French we say *Pierre frappe Paul*, the only morpheme phonetically expressed is the zero one ; the verbal form *frappe* is, in fact, characterized by the absence of a *désinence* in contrast to such other verbal forms as *frappons*, *frappez*, *frappera*, *frapperait*, *frappant*, etc. It is the absence of any ending which denotes that the verb is in the present indicative and the third person singular. But the relation of the subject to the verb and of the verb to the object has no outward sign. This it is that distinguished French from Latin, where in a sentence like *Petrus caedit Paulum*, the affixes *us* and *um* betray the part played by the two substantives in the sentence, indicating which is the subject and which the object. In French the only indication is given by the word-order. In other words, the word-order is here a morpheme. And whereas in Latin we can change the order of the three words as we please without prejudice to clearness of meaning, in French it is impossible to interfere with the word-order without altering the meaning. To say *Paul frappe Pierre* instead of *Pierre*

[1] Cf. for Iranian, Gauthiot, **C**, pp. 113–14.

frappe Paul is to commit the same error as confusing the use of the case in Latin and saying *Paulus caedit Petrum* instead of *Paulum caedit Petrus.*

Having now recognized the three main categories of morphemes, we must consider the relationship between the morpheme and the semanteme.

In certain languages these two elements have been combined in such a way that each word at once expressed both its semantic value and its morphological rôle. Both Semitic and Indo-European belonged to this type. For example, a word like the Greek ἔδωκε is perfect and definitive in itself. The semanteme is here represented by what we call the root, in this case, -δω-, expressing the idea of giving. The other elements tell us that this idea is connected with the past, and that its subject is singular : " he has given." None of the elements in the word has an independent existence ; neither the root -δω- nor the suffix -κ- nor the *désinence* -ε nor the augment ἔ- exists outside the combination ἔδωκε or analogous combinations. These are purely variable elements, since the root as well as the suffix and ending can be varied. We can say, for example, ἔθηκε, or ἔδωκα, or δώσω, or δίδωμι ; and even the root is subject to variations dictated by grammatical considerations, δίδωμεν as contrasted with δίδωμι. What makes the word a coherent whole, despite the complexity of its elements, is that the order of each element is immutably fixed ; they sustain and strengthen each other, and create in the mind the impression of a single representation, such as we have in the French " il a donné " which expresses both time and number.

The Semitic conjugation possesses similar examples. Once we know the identity of the three consonant radicals in all the forms derived from the same root, there is no longer any need to trouble about the vowel variations, affixes, and *désinences.* The Arabic form *qátala* " he has killed " has the same unity as the Greek ἔδωκε ; it comprises a semanteme, a root *qtl* and certain morphemes which distinguish the form *qátala* from all the others derived from the same root ; *qātala* " he sought to kill, he has fought ", *taqātālā* " they both fought ", *maqtūl* " killed ", *uqtul* " kills ", *yaqtulu* " he kills " (or " will kill " durative), *qātil* " killing ", etc. The Semitic verb-inflection also expresses gender : *qatálta* " thou hast killed " is masculine,

in contrast to *qätälti* feminine ; similarly, the third person has *qátala* " he has killed " (masculine) and *qátälat* " she has killed ".

Thus, we see that the Indo-European and Semitic languages combine two kinds of morphemes, vocalic ablaut and affixion, but in different degrees. The vocalic ablaut plays the greater part in Semitic. " The peculiar way these languages have of expressing the fundamental idea by consonants and secondary modifications by vowels, brings about a system of internal inflection of words." [1] " An Arabic root is characterized only by its consonants. As to the vowels, every consonant in every root may be followed by *ă, ā, ĭ, ī, ŭ, ū,* or zero, or have all seven forms and each of these seven serves to characterize the grammatical function." [2] This enables the Semitic languages to form a number of derivatives without the aid of affixes : Arabic *kátaba* " he has written ", *kătib* " writer ", *kităb* " book " (" that which is written ").

In Indo-European, words could not be formed in this way without the aid of suffixes. Compare, for example, the three preceding Arabic words with the Greek *συγγράφειν*, *συγγραφεύς*, and *σύγγραμμα*. But in Indo-European, as in Semitic, the purposes of the vocalic ablaut is to bestow a particular value upon the so-called root by separating it from the network of affixes and by concentrating upon it, so to speak, the maximum capacity for expression. The speaker becomes aware of the root as a reality owing to the fact that it has different vocalic states, each corresponding to a different use. The reality of the root lies in this variability. The principle of vocalic ablaut enables these elements to play a substitutive rôle. This is a very delicate and very subtle interaction, to which the Semitic and Indo-European minds had been trained.

We must not confound the root with the radical. In French we can recognize by analysis in words like *aim-er, part-ir, recev-oir,* the elements *aim-, part-, recev-* ; but these elements are only grammatical entities of whose existence the speaker is hardly aware. The grammarians call them " radicals ". In German, the principle of vocalic ablaut gives the radicals a clearer value. The opposition of *geben* and *gab, nehmen,*

[1] Renan, **CXI.**
[2] Meillet, **XCIV,** 4th ed., p. 133.

nahm, and *genommen*, may, to a certain extent, convey the idea of a single element characterized by the consonants *g-b* or *n-m*, within which certain vowels would arise according to the sense to be expressed. In the Indo-European group we must go back to ancient Greek and above all to Sanskrit, to get the best notion of the root.

Nevertheless, Indo-European and Semitic generally employ affixes (suffixes or endings) in addition to vocalic ablaut. In Indo-European, it is very rare for vocalic ablaut alone to characterize a word, and when this happens, the philologist must admit that the word has a zero suffix or a zero *désinence*. For example Greek φώρ compared with φέρειν or φόρος. Hence, the Indo-European root, although it has such a great morphological value, has nevertheless no independent existence. It was a convention often based upon an arbitrary analysis of facts which led the grammarians of India into the habit of breaking up their words and discovering their roots, and which accounts for our Sanskrit dictionaries to-day still tracing back the verb-forms to an ideal type which we call the root, from which all the forms would have sprung by the addition of suffixes.

Neither has the suffix an independent existence ; it owes whatever reality it possesses to vocalic ablaut (like the root), and to the meaning attributed to it, which is often very precise. In a Greek word like πατήρ, πατρός, πατέρες, the vocalic ablaut gives a precise value to the suffix (-τηρ-, -τερ-, -τρ-) in the different instances where it occurs. A word like ἀπάτωρ, pl. ἀπάτορες, which is only a compound of the preceding, gives us two new forms of suffix (-τωρ-, -τορ-). This is a suffix denoting relationship.

Desinences can be closely compared with suffixes ; they also are elements added to the root. They can only be distinguished from suffixes by their use, as the suffix indicates the general category to which the word belongs (agentive, aspect, instrumental, augmentative, diminutive, etc.), while the ending simply shows the part played by the word in the sentence. Thus, the two have different functions, but from the point of view of word-formation, both are morphemes of the same character in both Indo-European and Semitic.

Suffixes and endings are added to the root. This is the usual method of composition for Indo-European words,

although it is not invariable. The augment placed before the root is an exception ; in a verb like λύω, ἔλυσα it indicates past time exactly as the σ of λύσω indicates the future.

We must not be surprised, therefore, to encounter in other languages the opposite conditions to that prevailing in Indo-European or Semitic—namely, initial inflection. French even gives us some idea of this in the plurals of words beginning with a vowel, which are expressed by a prefixed sibilant : *arbre, z-arbres ; homme, z-hommes ; œuf, z-œufs ; oie, z-oies.* Popular language gives us a curious example of the extension of this peculiarity in the verb *zyeuter*, derived from the plural of the word *œil*. In certain Lorraine dialects, they say *zous* and *zelles* for *eux, elles, and zout* " leur " (on the analogy of *nout, vout*).[1]

However, this is merely an exceptional state of affairs in French, and it has no bearing on anything fundamental. On the contrary, certain Semitic languages like Arabic possess a true initial inflection. For example, in one of the two Arabic tenses, the imperfect, person is always indicated by an affix placed at the beginning of the word :

1st person sing. *aqtulu*, pl. *naqtulu.*

2nd person mas. *taqtulu-taqtulūna*, dual. *taqtulāni*, fem. *taqtulina-taqtulna.*

3rd person mas. *yaqtulu*, pl. *yaqtulūna*, dual. *yaktulāni*, fem. *taqtulu-yaqtulna, taqtulāni.*

In Georgian, which comes from quite a different stock, we find equally striking examples of inflection at the beginning of the word, and we conclude therefrom that the process of affixation consists of adding to the root morphological elements which may be placed either in front or behind.

In contrast to languages like Indo-European and Semitic, where the word formed from the root and the affixes is a complete and independent entity, there is a series of languages in which the morphemes are more or less independent of the semantemes. The clearest type is that in which a language distinguishes two categories of words, the full and the empty, to use the Chinese terminology. The full words are the semantemes, and the empty the morphemes. The latter are never

[1] E. Rolland, **VIII**, vol. v, p. 151.

accented. Thus, the word *ti*, a sign of subordination, is an empty word : *wo ti ul-tsu* " my son " (*wo* " me ", *ul-tsu* " son "). It plays the rôle of the preposition *de* in French, of the genitive *s* in English ; it even serves to indicate subordination and is hence equivalent to a conjunction. The empty words are generally only specialized and atonic forms of the full words. For example, the full words *tsu* and *ul* which together express " son " are commonly added as empty words to other full words, and completely lose their meaning. *Men* " door ", *tao* " knife ", with the affixed substantival *ul* or *tsu*, become *men-ul* (pronounced *möl*) or *tao-tsu* (pronounced *taoze*). The verb *leao* " to finish " serves as an empty word (under the form *la*) to express the past tense ; *lai la*, literally " come finished ", signifies " someone has come ". One can also combine two forms of the same word which are at one and the same time full and empty words ; *leao-la* " someone has finished ".

Not that we lack excellent examples of empty words in Indo-European. The Sanskrit *iti*, signifying that words are being quoted, is one : others are *ἄν* in old Greek, *θά* or *ἄς* in modern Greek (see p. 58): It is impossible to translate these words in a dictionary ; they have no concrete meaning, but are coefficients, exponents, algebraic values, rather than words. Nor can they ever stand by themselves. They only acquire meaning in contact with some other linguistic unit with which they form one whole, such as the mind can realize in its entirety; *ἄν* alone signifies nothing, but *ἂν ἐποίει*, *ἂν ποιῇ* have a definite meaning in Greek. French has certain empty words, for example, in its prepositions. It is impossible to translate our preposition *à* in German by another single preposition : *à pied* (Ger. *zu Fuss*), *à Berlin !* (Ger. *nach Berlin !*), *à la côte* (Ger. *an der Küste*), *à l'étroit* (Ger. *in der Enge*), *à regret* (Ger. *mit Bedauern*), *à mes frais* (Ger. *auf meine Kosten*), *à part* (Ger. *bei Seite*), *à six heures* (Ger. *um sechs Uhr*), etc. Our auxiliaries *être* or *avoir*, like the auxiliaries *do*, *shall*, *will*, in English, are only empty words. In the same way the auxiliary *mon* in Danish, after having more or less vaguely expressed the idea of future tense, has now become a mere accompaniment to the verb, particularly in the interrogative position, so that we may consider *mon* nowadays as an interrogative adverb rather than a verb : *mon han kommer ?* " Will he come ? " in the sense of " know if he will come ? "

Although some Indo-European languages have thus created empty words, the Indo-European and Semitic word in general is characterized by its unity. Morphemes and semantemes are united in an indissoluble fashion. On the other hand, there are languages in which the connexion is more or less loose.

In Chinese, although the position of the empty word is absolutely fixed and can no more be displaced than in French or English, it nevertheless has a certain independence, firstly, because it can be left out, for *men* may be used as well as *men-ul* " door ", and, secondly, for the converse reason that it is sometimes repeated in order to emphasize the idea it expressed and also separated from the word to which it refers : *leao la che la* " the affair is ended ".

Finno-Ugrian and Turco-Tartar are probably the languages which show the least clearly defined connexion between morphemes and semantemes. In Hungarian, in a series of words which agree with each other and play the same rôle in the sentence, the morpheme is sometimes expressed only at the end of the last word : *a jó ember-nek* " to the good man ", (and not *az-nak jó-nak ember-nek*), *a nagy varos-ban* " in the large city ". [1] In Turkish the plural sign *-lar-*, in a word like *kizlari* " his daughters ", is inserted between the semanteme *kiz* " daughter " and the possessive suffix *-i* (*kizi* " his daughter ", in the singular).[2]

In Turkish, also, the bond between the two elements is so weak that the order of the morphemes is not fixed. In French we cannot say *nous avons le vu* for *nous l'avons vu*, nor *j'aime te ne pas*, for *je ne t'aime pas* ; but the Turk says indifferently *sevmišlerdir* " they have loved ", or *sevmišdirler ; seveželerdir* " they will love ", or *seveželerdirler ; seviyorlar idi* " they loved ", or *seviyor idiler ; sevdim idi* " I have loved ", or *sevdi idim ; sevsem idi* " if I loved ", or *sevse idim*.

Each of these groups may be analysed and broken up. Apart from the root, which has a fixed position and comes at the beginning, the different elements expressing tense, person, or number are sufficiently independent of both the root and the neighbouring elements to be distributed with a certain freedom throughout the whole word. In general they have no independent existence. For example, the element *lar* (*ler*) is as

[1] Schleicher and V. Thomsen, quoted by Jespersen, **CXXXIV**, p. 37.
[2] Gauthiot, **LXXIII**, pp. 31–2.

incapable of standing alone as a Greek or Latin formative. But there is a much looser bond between this element and the semanteme than between a Greek ending and its corresponding theme. The element *dir* is the regular third person singular of the substantive verb ; in order to form the corresponding plural, *ler* must be added. In old literary Osmanli, however, the order *dir-ler* may be transposed even when these elements are employed correctly to express the third person plural of the substantive verb.

Some languages express the morphemes in more words than others. Turkish, as we have just seen, freely shifts their positions, but it does not repeat them twice. It may say indifferently *seviyor idiler* or *seviyorlar idi*, but it does not combine the two expressions into *seviyorlar idiler*. But repetition, previously mentioned in connexion with Chinese, is the favourite procedure in certain languages like those of the Bantu group, where for each grammatical category there is a corresponding classifier expressed in each word, irrespective of the number of words. Thus, in Soubiya the sentence " The girls are walking ", will be expressed *ba-kazana ba-enda* or even *b-o ba-kazana ha-enda*, *ba-* being the classifier indicating the plural for persons ; and for " the handsome man " they say *mu-ntu mu-lotu*, *mu-* being the classifier for a person in the singular. Thus, there are in Bantu seventeen classifiers, and even twenty-three in certain dialects.

The Bantu prefixes are equivalent to the suffixes in *Ful* and in the group of West-African languages called the *Voltaic* tongues. In Ful there are twenty-one classes, four of which are plural. For example, in the root *lām*, which expresses the idea " to command ", we have : *lām-do* (pronominal class in *o*) " chief ", *lām-u* (pronominal class in *ngu*) " reign ", *lām-de* (pronominal class in *nde*) " a command ", *lam-be* (pronominal class in *be*) " kings, chiefs ", etc. In this stock the roots are never found isolated, but are always accompanied by a class sign. And this is repeated in each element in the sentence : *debb-o danne-è-dyo e* " this white woman ", *rew-be ran-è-be be* " these white women ", etc.

In languages of this type the morphology is inextricably interwoven with the whole language. The morphemes can only be distinguished by a fine analysis in the course of which the

sentence becomes completely disjointed, fragmentary, and finally unrecognizable.

The opposite state of affairs exists in certain American languages, where the morphemes and semantemes are conceived and expressed separately. The morphological signs are grouped together in advance, at the beginning of the sentence, and give a sort of algebraic summary of the thought ; everything is then found except the nouns, which follow. In order to say : *the man has killed the woman with a knife*, the sentence would be as follows : *he—her—that—with || to kill—man—woman—knife* (Chinook).[1] All that precedes the bars, which we introduced into the sentence, comprises only the grammatic signs, the morphemes ; the semantemes come after.

We need not be excessively surprised at such a peculiar construction. Spoken French has some turns of expression very similar to this. We hear people say in popular speech : *Elle n'y a encore pas || voyagé, ta cousine, en Afrique* (" She has not yet gone, your cousin, to Africa ? ") or *Il l'a ti jamais || attrapé le gendarme, son voleur ?* (" Did the gendarme ever catch the thief ? ") All that precedes the bars likewise consists of morphemes only—signs for the subject, object (direct or indirect), gender, number, tense, and the negative or interrogative character of the sentence. Thus, before we know who and what are being discussed, we know all the grammatical elements of the sentence. All that is still required to make a complete sentence is an indication of the persons and the acts they perform, i.e. the facts of the case. The abstract facts are placed at the beginning, and the concrete at the end.

Owing to this variety of morphological processes, the term *word* must be differently defined for each language.

If there are languages in which the word may be easily defined as an independent and indivisible unit, there are others where it melts, in a sense, into the body of the sentence, where it cannot really be defined except by surrounding it with a mass of varied elements. In the French sentence *je ne l'ai pas vu* (" I have not seen it "), ordinary grammatical analysis recognizes seven different words. In reality, there is only one, but this is a complex word formed from a certain number of

[1] Cf. Boas, **CXXX,** intro., p. 38.

telescoped morphemes. They have no independent existence ; they are of value only in being interchangeable to the mind, for we can say *je ne t'ai pas vu, tu ne m'avais pas vu, nous ne vous aurons pas vu*, etc., thus varying as we please the constitutive elements of the word. Doubtless we must observe the relative differences between these elements. The *je, me, tu, le* are actually simply morphemes without any independent existence and they are not used separately. The *je* exists only in a combination like *je parle* " I speak ", *je cours* " I run " ; the *me* likewise can only be used in phrases like *je me dis* " I tell myself ", *tu me frappes* " you strike me ". Were it not for the fact that one or more elements may be introduced between the pronoun and the verb (*je dis, je le dis, je ne le dis pas*), we could consider the *je* of *je dis* as equivalent to the final *o* in the Latin *dic-o* and assume that French has initial inflections ; *je-dis, tu-dis, il-dit* (pronounced *idi*). We have not reached that stage ; but it has been pointed out that already for several centuries the pronominal subject has been tending more and more to fuse with the verb. We should not say to-day, as Rabelais did : " Je, dit Picrochole, les prendrai à merci." Popular usage, on the contrary, frequently employs the pronoun in the third person even when the subject is expressed : " *Le père, il dit ce qu'il veut* " (Father, he says what he likes), " *les bourgeois, ils ont bien de la chance* " (the middle classes, they're all right), etc. Yet a morpheme such as *nous, vous*, is, to a certain extent, akin to a word since the same form can occupy an emphatic position and correspond, at the same time, to *je, me*, and *moi* ; to *tu, te*, and *toi* ; to *il, le*, and *lui*. This further complicates the problem of defining words, quite apart from the presence of adverbs and negations, which hover between the conditions of morphemes and words in the midst of verb-forms. It may be said that in French the word is very ill-defined.

This is equally true of languages like Turkish, in which the morphological elements either waver between one semanteme and another, or hang loosely together. The unity of the word in Turkish is preserved by a phonetic phenomenon, vocalic harmony which determines the vowel character of different syllables in accordance with a dominant syllable. The unity of the Bantu word is due to another cause, to the use of classifiers, determined in each morphological category by the

rôle of the word in the sentence. However, we are constrained to include under the term "word" in Bantu, as in French or Turkish, various elements which are felt to possess a substitutive character, and which have therefore a very loose connexion with the semanteme.[1] Finally this is also the case with certain primitive American languages like the Greenland dialect of the Eskimo, in which it is impossible to fix the divisions in the sentence and where there is a tendency to form as many words as sentences, and as many sentences as words.[2]

On the contrary, in the Semitic languages, as well as in the early Indo-European tongues, like Sanskrit, Vedic, or Greek, the word has a complete autonomy, manifested in various kinds of characteristic phonetic treatment, as, for example, in the final syllables, or the delicate play of accent-balance. The word bears within itself the sign of its use and the expression of its morphological value ; it has a completeness which leaves nothing to be desired. The Chinese word, for different reasons, can also be easily defined. Separated from its context, however, it loses all its expressive value, and has only a vague abstract meaning which can be related to no particular use.

We cannot, therefore, attempt any definition of the *word* which shall be applicable to all languages, except perhaps the definition proposed by M. Meillet, which purposely avoids any explanation of the grammatical use and its expression : "A word is the result of the association of a given meaning with a given combination of sounds, capable of a given grammatical use." [3]

[1] Gauthlot, **LXXIII,** pp. 34–5.
[2] Finck, **CLXI,** p. 31.
[3] **X,** 1913, p. 11.

CHAPTER II

The Grammatical Categories

TO the concepts expressed by means of morphemes, we give the name *grammatical categories.*[1]

Thus, gender, number, person, tense and mood, interrogation and negation, subordination, purpose, instrumentality, etc., are grammatical categories in languages where these concepts are expressed by special morphemes. Everyone can determine how large is their number, and how varied their character, by appealing to his linguistic knowledge. Just as the number of morphemes varies with each language, so, naturally, does the number of categories. The less grammar a language possesses, in the sense indicated in the preceding chapter, the less grammatical categories it will possess. Certain languages, however, have a large number.

Whatever the language, grammatical categories can be defined only by the form in which they are expressed. Ancient Greek had a mood called the optative, which corresponded in some of its uses to our French conditional, and roughly speaking served to express volition. We cannot say that any language has an optative unless it possesses a special form for this mood. And where the subjunctive and optative are confused—as in most Indo-European tongues—people no longer distinguish, in the single persisting form, the two uses which were formerly expressed by two distinct forms. Only one mood remains, and it may be called indifferently optative or subjunctive, for, to the speaker, it is but a single word. This feeling is due to the unity of the form, despite the variety of its uses. This does not ultimately prevent the creation of new forms corresponding to uses which no longer have a special form of expression in the language. Thus, for example, the confusion of the aorist and the perfect, or rather the transformation of the old perfect into an historic tense, has in many languages abolished the means of expressing the perfect. Some languages have become

[1] Cf. Göbel, "Die grammatischen Kategorien" (**XXXII,** vol. v, p. 189 ff., Jahrg. 3, Abt. 1) : Van Ginneken, **LXXVII,** p. 65 ff.

resigned to the absence of a perfect and have continued to do without it ; others have created a new perfect, on a different plan from the old one that has been lost.

Grammatical categories are thus always relative to the language in question, and to a special period in the history of each language. The Greek optative, for instance, lasted only for a period which can be sharply delimited. We know at what epoch in Germanic, alongside of the single past form, there arose a new one which corresponded in meaning to the old perfect. Indeed, the history of grammatical categories can often be accurately established for each language. But the system of categories appears under different forms in each different language. French grammar was built up in the seventeenth and eighteenth centuries on the model of ancient Greek and Latin—and it has remained warped ever since. We still make use of a nomenclature which does not square with the facts, and gives an inaccurate idea of the grammatical structure of our language. Had the principles governing French grammar been established by any but Aristotelians, it would assuredly have been very different from what it is.

The classification of grammatical categories falls within the scope of general morphology, and is a task still to be accomplished. If we admit that there are as many categories as there are morphemes in all languages put together, we should be going to extremes in the matter of their number. Following the empirical method, we shall limit ourselves here to an examination of a few categories chosen from among the more general, such as *gender*, *number*, *tense*, and *voice*. From this study certain useful principles and facts will emerge which will be duly summarized.

The category of gender, as it has existed, for example, from the earliest stages of Indo-European or Semitic,[1] has been imposed so rigorously upon the language that from the moment a substantive comes into the mind of a speaker, it is provided with a gender which is characteristic of it, and which is often the only characteristic it possesses. It is by gender alone that we distinguish in French between *le poids* " weight ", and *la poix* " pitch ", *le père* " father ", and *la paire* " pair "—

[1] Cf. for gender L. Adam, **XLIII**; H. Winkler, **CCXXII**; K. Brugmann, **XXXI,** iv (1889), pp. 100–9; Barone, **CCXXVI.**

words which differ only in orthography, and, with even better reason, between *le livre* " book ", and *la livre* " pound ", or *le poêle* " stove ", and *la poêle* " frying-pan ", which are spelt alike ; as in German *die Kiefer* " the fir ", and *der Kiefer* " the jaw ". There is no other respect in which a foreigner blunders more sadly than in the confusion of genders. When such mistakes become too frequent, they render the language incomprehensible.

And yet there is no rational basis for grammatical gender. We cannot say why *la table* " the table ", *la chaise* " the chair ", *la salière* " the salt-cellar ", etc., are feminine, and *le tabouret* " the stool ", *le fauteuil* " the arm-chair ", *le sucrier* " the sugar-bowl ", etc., are masculine. In a not unrelated language the corresponding nouns are often of different gender ; in German they say *der Sessel* " the arm-chair ", and *der Stuhl* " the chair ", *der Löffel* " the spoon ", and *der Kegel* " a nine-pin ", the genders being just the reverse of the French *la cuiller* and *la quille*.

We know, moreover, how easily genders become modified in the course of time. In the history of the Romance, German and Celtic tongues, the changes in gender have been numerous.[1] In French the " feminine " or " masculine " ending has often brought about a corresponding change in gender. So much so, indeed, that quite a number of words with " feminine " endings, which have become stabilized as masculine in correct usage, were and still are given the feminine gender in popular speech, especially when an initial vowel prevents the definite article from indicating gender, as in the words *exercice*, *orage* (storm), *ouvrage* (work), etc. Even the words *prophète* (prophet) and *pape* (Pope) were considered feminine in the Middle Ages because of their endings. This shows how different natural gender is from grammatical gender. We still make *l'ordonnance* (orderly) and *la sentinelle* feminine, when designating persons of the stronger sex, just as the Romans said *auxilia* or *uigiliæ*.

Our grammatical gender is so ill-adapted to the expression of natural gender that, in about three-fourths of the cases that occur, there is in French no way of expressing the difference of sex by grammatical gender. The words *médecin* or *professeur* have no feminine. We are considerably embarrassed as to how

[1] For French cf. Brunot, **LVI,** p. 233 ; for German, Behaghel, **CXLIV,** p. 318 ; for Welsh, J. Morris-Jones, **CXXXV,** pp. 228–9.

to apply them to a woman. We can say neither *médecine* nor *professeuse*, and in the first example this is obvious from the fact that the word *médecine* has a different meaning. But we cannot even solve the whole difficulty by using such words as *médecin* and *professeur* with the feminine article, as the Greeks did in ἡ Λεόντιον, or the Romans in *illum senium* (Terence). *La médecin, la professeur*, would shock a French ear. In correct French we are reduced to saying *la femme médecin, la femme professeur*, using the word *femme* as a kind of morpheme indicative of sex. We are thus just as badly off in French as in a language devoid of distinction between genders. In similar cases English employs the pronouns *he* and *she* as morphemes (thus, *he-goat* or *she-goat*), and Irish prefixes the element *ban* (derived from *ben* "woman"): *ban-dia* "goddess", *ban-file* "poetess", *ban-tuath* "sorceress", etc. We even say in French *une femme cocher* ("woman-coachman"), or *une femme cochère* ("woman-coachwoman). So much do we lean upon our morpheme *femme*. *Une cochère* by itself would shock our ears.

Present-day French very much resembles primitive Indo-European in this respect. There was no morphological expression of natural gender.[1] Furthermore, no Indo-European word showed by its actual form any difference between masculine and feminine: *toga* and *scriba*, *æsculus* and *famulus*, *arbor* and *dolor*, are all inflected exactly in the same way in Latin, though in each group the first word is feminine, the second masculine. If it has come about that in several languages the masculine and feminine genders have been distributed between certain suffixes, as, for example, in Gothic, where the words corresponding to the first Latin declension (type *toga*) are all feminine, and those corresponding to the second (type *famulus*) are all masculine, this is merely the result of innovations. The Greek words πατήρ "father", and μήτηρ "mother", υἱός "son", and νυός "daughter-in-law", have the same inflection in Indo-European.

True, the neuter must be set apart. This is the only gender that can be defined by its form; in Greek τέκνον "child", and στέγος (gen. στέγους) "roof", σίναπι "mustard", and μέθυ "hydromel", as well as Latin *templum* and *corpus* (gen.

[1] Ernout, **XCVIII**, p. 211.

corporis), *mare* and *cornu*, all are obviously neuter. The Indo-European neuter is a special gender ; it is contrasted with the two sex genders, but it has a more limited range. It has but one case in its own form, and this would seem to indicate that the category is gradually dying out and has no real independence in the system as a whole. Its relation to the two other genders is complementary in that it expresses certain notions quite independent of the opposition of masculine to feminine, or vice versa. For example, it often designates objects which are regarded as non-active and incapable of being invested with personal power, and at times it also seems to express the collective idea.

In what, then, does Indo-European gender consist ? Simply in agreement. πατήρ is masculine in Greek because we say ὁ πατὴρ ἀγαθός ; and μήτηρ is feminine because we say ἡ μήτηρ ἀγαθή. The article and adjective indicating and defining the substantive have a different form according to the gender of the word. This fact has entailed important consequences in the history of gender. Gender has followed the vicissitudes of the phonetic expression of agreement. In cases where the agreement is no longer indicated, or where it is indicated partially, owing to accidents in the phonetic system, gender had died out or fallen into desuetude. In French, as in ancient Greek, it is the article and adjective which maintain gender. But the article has the same form before all words beginning with a vowel : *l'aurore* (dawn), *l'abîme* (abyss), and gender in these words is therefore less distinct than in others. It is, indeed, generally the words with an initial vowel that have been subjected to a change of gender in the history of the French language. When, furthermore, the adjective qualifying them is of ambiguous gender, there is no longer any expression of gender left ; *l'aurore est splendide* (the dawn is splendid), or *l'abîme est sombre* (the abyss is gloomy). It is only when we say *l'aurore est belle* (the dawn is beautiful), or *l'abîme est profond* (the abyss is deep) that the words *aurore* and *abîme* possess gender.

English has gone much further than French. Old English had three different forms for the three genders in the singular article : *sé, séo,* and *ðæt*. It even possessed a complete inflection for the article, with four different cases for each number. This inflection, however, was quickly simplified. First of all

the nominative forms became by analogy *de, deo, daet*; then the masculine and feminine were confounded under a single form *de*; finally, the neuter dropped out, and there remained to it but a single form in the singular, which was, moreover, the same as that of the plural. By losing its inflection, the article deprived the language of gender, for the adjective in its turn was deprived of its inflection. Danish has not advanced so far in this respect; it still had *den* for the masculine-feminine and *det* for the neuter; in the plural it has *de* for all three genders. The phonetic evolution of the article has permitted it to retain two genders, which, however, so far as their origin is concerned, do not correspond to the masculine and feminine in French.

This is not the place for investigating the origin of grammatical gender in Indo-European.[1] Several philologists have attempted it, without coming to any satisfactory conclusion. The question goes beyond the narrow limits of Indo-European grammar; it is a question of linguistics in general, which recurs in other groups of languages. Anthropologists, like Frazer, have claimed to solve it by supposing that the difference between the two genders had something to do with the special language used by women; the same noun would thus have two different forms according to which sex used it.[2] The question, however, is hardly so simple as this. Gender does not consist only in an opposition of masculine to feminine, for Indo-European also possessed a neuter.

In certain American and African idioms gender presents an altogether special aspect. For example, Algonkin distinguishes between animate and inanimate gender.[3] The distribution of the gender among different objects has no significance there as such. The animate group, in addition to animals, includes trees, stones, the sun, the moon, stars, thunder, snow, ice, grain, bread, tobacco, sledge, fire-flint, etc. The fact is that "this differentiation of gender is absolute and fundamental, for it determines the plural of nouns, the expression of possession,

[1] Cf. particularly the words cited before, of H. Winkler, K. Brugmann, Mario Barone, and also: B. I. Wheeler, "The origin of grammatical gender," **XXIII,** vol. ii, pp. 528–45 (1899).

[2] Van Gennep, **LXXIV,** p. 265.

[3] J. P. B. de Josselin de Jong, *De waardeeringsonderscheiding van "levend" en "levenloos" in het Indoeuropeesch vergeleken met hetzelfde verschijnsel in enkele Algonkintalen.* Dissertation, Leiden (1912).

the demonstrative pronouns, verbs, and adjectives".[1] With regard to the distribution of objects between the two genders special analogical extensions have doubtless taken place. In Slavonic an animate gender also exists. Its origin, and above all, its extension, can be accounted for by a regular morphological development from the original Indo-European.[2] In Armenian, too, there is a tendency to place the animate and inanimate in opposition,[3] and in Spanish, after the verb—in old French even after the noun (le bourg *le* roi, les maisons *du* bourg). Elsewhere, we meet other oppositions. For instance in the language of the Masai, an East-African race, there is one gender for everything big and strong, and another for everything small and weak,[4] which some have interpreted arbitrarily by an opposition of masculine and feminine : *ol tungani* " the man ", *en dungani* " the little man". It would be better simply to say that here there is a strong and a weak gender. This category is not far removed from what we elsewhere describe as diminutives.

In the African languages gender is called " class ". The Bantu tongues are dominated by the existence of " classes ", each characterized by a special affix, with all the words of the language distributed between them. We have already given examples (p. 86). The indication of class is just as important as that of gender in Greek and Latin words. It is a self-imposed mental necessity. The classifier for each word (a term used to designate the phonetic element indicating class) is so important that it is repeated in the course of the sentence for all words referable to it. One would think that the principal word imposes its own colour on all those depending on it.

Gender in European languages is only another way of expressing the " class " of Bantu. It represents a mental attempt to classify the exceedingly varied ideas expressed by nouns. The principle of this classification doubtless responds to the conception of the world entertained by our remote ancestors, and mystic and religious motives contributed towards its stabilization. The traditional form persisted long after comprehension of its original purpose had been lost.

[1] L. Adam, **XLIII.**
[2] Meillet, **XCVI.**
[3] Adjarian, *Classification des dialects arméniens*, Paris, pp. 18 and 47.
[4] Merker, " Die Masai " quoted by Feist, **XXXVI,** vol. xxxvii, p. 113.

There are grammatical categories which have a closer relation to reality than has gender, and are rationally justified by our present conception of the world: such as number and time. According to whether I say *the horse eats*, or *the horses will eat*, I express two contrasting ideas, singularity as opposed to plurality, and present time as opposed to future. This corresponds to empirical facts. But when we come to examine how these categories, which are two of the most general, are expressed in different languages, we find in the first place that they present forms which limit the generality, and in the second place that they rarely possess in actual usage the adequate expression we should expect.

In French we have a singular and plural; but the distinction of singularity and plurality, which for us constitutes number, is not the only aspect of this category. There are languages which once possessed, or still possess, a dual number. Indo-European had this dual, which was maintained in historic times for a shorter or longer period according to the language concerned, and gradually disappeared from almost all of them.[1] In India, both Vedic and classical Sanskrit have the dual, in contrast to Prakrit and Pali, which have lost it. Old Persian and Zend employed it rigorously, but there is not a trace of it in Pehlevi. At the earliest time at which we know them, neither Armenian nor Latin possessed it. It is very much alive in Old Slavonic, and to-day certain dialects such as Slovenian and the Wendish Lausitz (Saxony) still manifest it. In several Lithuanian dialects it is only now disappearing. Gothic expressed it only in the pronoun and verb, and there are no more than traces of it in the pronoun of Old High-German. These traces, however, are slow to vanish, and in the present-day Bavarian dialects we still encounter the dual pronouns *ös* and *enk*, which had disappeared from the written language before the end of the thirteenth century. In the Celtic group, Irish alone, in the most ancient form, retains the dual in the declension of nouns, but this number, even here, occupies a precarious position, because the noun in the dual must always be accompanied by the noun signifying "two". Ancient Greek presented an extreme variety, instructive in more ways than one, but it ended by eliminating the dual altogether.[2] This is the general

[1] Brugmann, **CL**, ii, pt. ii, p. 195.
[2] Cuny, **LXI**; cf. the bottom of p. 356.

tendency of all Indo-European languages. That this elimination took place at rather distantly separated periods in the different branches was due to historic causes.

We must believe that the employment of the dual responded to a need differing from any which our modern habits of thought can suggest. To-day we can see no reason for opposing duality to plurality. There are, however, in the category of number, other distinctions which we do not express, but which deserve to have a grammatical form, namely, the collective and the absolute. In French we have no way of differentiating these two ideas ; it is a deficiency from which we often suffer. All the discussions we see in certain grammars as to the spelling of "*gelée de groseille*" or "de groseilles", "confiture de pomme", or "de pommes", may be ultimately referred to a confusion between the plural and the collective, due to the absence of a grammatical category for the collective. When we say : "le cheval court" (*the horse runs*), we suffer likewise from an inability to specify whether we are alluding to a special isolated horse or to horses in general. We do not distinguish the individual from the species, nor the particular from the general. In this respect, Indo-European languages are nearly all [1] in the same state as is French : They have no regular expression for certain important aspects of the category of number.

There are also lacunae in the category of *tense*.[2] In a language like French or German it is the verb that essentially expresses the *tense*. In German the verb is called a *Zeitwort*. In French there is a whole gamut of varied tenses responding not only to the three divisions of past, present, and future, but also to relative differences in time. We have a means of expressing the future in the past, and the past in the future. Few languages are so rich as French in this respect. German has scarcely anything but a past tense ; it confounds in a single form our imperfect and past definite, *ich liebte*, for example ; and this one form even tends, in certain parts of Germany, to take the place of the analytic past of the type *ich habe geliebt*, while in certain other parts, on the contrary, it is the analytic tense

[1] Celtic languages developed a singulative ; cf. Pedersen, **CLXXXIX**, vol. ii, p. 58.
[2] Cf. Herbig, **XXX**, vol. vi, p. 170 ff.

which sums up within itself the whole expression of past time. The French richness in tenses comes from the Latin, which is also provided with a generous series.

Yet the expression of tense in Latin was an innovation. Comparative grammar teaches us that Indo-European principally expressed aspect.[1]

The category of duration is called *aspect*.[2] Our French tenses express the moment in which an action is accomplished, is being accomplished, or will be accomplished. They take no account of the duration of such accomplishment. This, nevertheless, is an idea of importance and one which, in certain verbs, dominates all other considerations of meaning. Indo-European was much less preoccupied with expressing tense than duration. What concerned it in an act was not so much to indicate in what moment it should be accomplished (past, present, or future), as to indicate whether it was conceived of in its continuity, or at some definite point in its development—whether it was accomplished at the initial or final point, whether the act took place once, or was repeated, and whether it had a term and a result. For this reason, in comparative grammar we distinguish between durative and instantaneous verbs, perfectives and imperfectives, inchoatives, iteratives, terminatives, etc. It is impossible to understand the verbal system of Sanskrit or ancient Greek if we do not take these different shades of signification into account, or if we start out with the idea of finding different tenses expressed as they are in our language. In ancient Greek the difference between present, aorist, and perfect, lies in the " aspect " of the verb. The Slavonic tongues preserved this predominance of aspect over tense for a long time, and in a certain measure they do so at the present day. Every verb in these languages belongs to a category of " aspect " which is characteristic of it, and which determines it, as much as the past and future are characteristic of the verbs in French.[3] This constitutes one essential difference between Russian and French, and one of the greatest difficulties a Frenchman, for instance, encounters in the study of Russian.

As regards the expression of tense, Semitic languages bear

[1] Brugmann, **CL**, ii, 3, p. 68.
[2] Barbelenet, **XLVII**; Barone, **CCXXV.**
[3] A. Mazon, **XCII.**

a close resemblance to the old Indo-European type. Semitic in general has no means of distinguishing the different tenses of a verb. On the other hand, it has an astonishing variety of means for translating subjective verbal relations, expressing for example, a causative, conative, intensive, desiderative, putative, jussive, reciprocal, and reflexive. All these technical terms designate the various categories of the Semitic verb, preserved to greater or lesser degree in the different dialects. There are only two tenses, properly so-called, in Semitic, the imperfect and the perfect, derived from different themes. But the terms perfect and imperfect must not be regarded as the equivalent of the terms used in French, in any sense of the word. They should be taken in an etymological sense to denote that an action is either completed or not completed. That is to say, in Semitic as in Indo-European it is the expression of the duration of time that dominates, and not that of the kind of time. Assyrian, for example, employs the " perfect " in the sense of present and future ; and in Arabic the " imperfect " is as much expressive of the future as of the present. " In Hebrew, the form improperly called future serves to indicate the past in narrative ; furthermore, the form known as preterite may serve at will for the future. We know to what an extent the interpretation of the text of the prophetic books has been obscured on this account. This indecision comes from the fact that the idea of tense, absent to begin with, was added in a more or less clumsy fashion afterwards to fit it into a conjugation not adapted for it." [1]

The grammatical category of tense, therefore, like that of number, is in many ways inadequate. Even within the prescribed limits of its use it does not always correspond closely enough to the idea that is to be expressed. In many Indo-European languages, future and past have to be expressed by forms which are neither future nor past. Although Latin possessed a future, Plautus used the present to express an action which manifestly referred to the future when he said (*Captivis*, 749) : *peristis nisi iam hunc abducitis.* The hearer is not for a moment in doubt as to the time referred to in this sentence. Similarly, in French, we commonly say : *" j'y vais "* for *" je vais y aller "*, *" je m'apprête à y aller "*, *" j'irai "*. Racine says in *Bérénice* :

[1] M. Bréal, **VI**, vol. xi, p. 271.

Peut-être avant la nuit l'heureuse Bérénice
Change le nom de reine au nom d'impératrice.

German constantly uses the present instead of the future. The very awkward construction "*ich werde kommen*" occurs chiefly in grammars or in the German spoken by foreigners. Germans themselves simply say in conversation "*ich komme*". It is, indeed, a general tendency in language to employ the present to do duty for the future: an old present still serves as a future in Russian, Welsh, Gaelic, etc.

In French, however, the simple future may express the present ("Il sera à Paris à l'heure qu'il est"—he will be in Paris by now) or, again, the future anterior may have the value of a past ("Nul ne se ressouvient d'un mot qu'il aura dit," La Bruyère). In both of these cases the future doubtless introduces a special shade of meaning (possibility, eventuality) into the sentence, but the fact remains that it here relates to a present or past.

The past can also be expressed by the present. In narrative this frequently happens, and hence we have what is known as the historic present, in which literary people find a special charm. They say that the present is more expressive, more descriptive, that it makes the scene live again before the reader's eyes, that it links us in thought with the moment at which the action took place. This is true enough. But such an explanation, which might just as well be applied, moreover, to the use of the present for the future, has no value from the grammarian's point of view. He is compelled to argue thus: in order that a writer, for artistic purposes, may use a certain turn of expression, that he deems more expressive or more elegant, language must first provide it, and thus the respective sphere of present and past must be little differentiated in a grammatical sense for it to be so easy to pass from the one to the other without destroying the clearness of the meaning.

The past, in fact, may likewise serve to denote the present. It was by a tense that served to express the past that ancient Greek denoted an habitual present in sentences with a general bearing, or in maxims: Homer, for example, would say:

ὅς κε θεοῖς ἐπιπείθηται μάλα τ' ἔκλυον αὐτοῦ

using an aorist which would be naturally translated by the present in French or in English thus: "Unto him who obeys

the gods, the gods hearken." This aorist is said to be gnomic: it serves to express an action which in fact belongs to no time, and which, like all the truths of experience, can be affirmed of either the future, the present, or the past. In French, as in most languages, it is the present which seems to us best fitted for this gnomic use, but French may also here employ the future and so may Latin: "*pulcra mulier nuda erit quam purpurata pulcrior*" (Plautus, *Mostellaria*, v. 289; cf. v. 1041).

What we call the *present* in French or English, is an elastic tense which lends itself, as we have just seen, to the expression of the future and the past, and is applied vaguely to an action narrowly limited to the actual present ("voila le tramway qui passe"—the tram is passing) or to an habitual act ("j'y passe tous les dimanches"—I pass there every Sunday), or to an act which does not relate to any precise time ("le tramway passe dans cette rue"—the tram runs along this street).

We should never be done if we tried to enumerate all the inconsistencies which languages present in the use of tense. Is it not rather amusing that in French the conditional past, or at least the tense we describe by this term, can be used in speaking of the future: "si l'on me confiait cette affaire, je l'aurais bien vite terminée"—"if this matter were left to me, I should soon have finished it"? Doubtless the origin of this use can be easily traced; it is simply a question of analogy. Our conditional is a future imperfect, and the analogy arose from sentences in which the two verbs were respectively in the present and future: "si l'on me confie cette affaire, je l'aurai bien vite terminée"—"if this matter is left to me, I shall soon have finished it". That shows how easily language utilizes the resources at its disposal, but also how difficult it is to bring order into the category of tense. It will always be rather ill-defined.

The category of *voice* is even more ill-defined.[1] What we understand by *voice* is a kind of aspect of the verbal action in relation to the subject, according to whether we consider the action as being performed by the subject, experienced by him, or performed in his interest, with his participation. The classic type is the opposition, in Greek, of active, middle, and passive: *νίζω, νίζομαι* "I wash", "I wash myself", and "I am washed

[1] For the contrast of the active and passive voices, cf. Uhlenbeck, **XXX**, vol. xii, p. 170; Schuchardt, **XXX**, vol. xvii, pp. 528–31; and Finck, **XXXVIII**, vol. xli, pp. 209–32.

(by someone else)". In Greek, however, this distinction between the three voices is not sharply defined. It is the prepositional object which forms the passive rather than the verbal form : ὑφ' Ἕκτορος δαμείς "subjugated by Hector" is considered a passive, but ὕφ' Ἕκτορος πεσών "falling under Hector's blows" is active only by a grammatical convention. The two expressions convey the same idea and it is probable that originally one was not more passive than the other. In Latin certain passives like *uapulo* "I am beaten", have an active form. In a general way, what we understand by an active verb in our classical languages is perhaps really defined by a certain suffix or formative, but this is not defining it according to meaning : if *je donne* (I give) or *je frappe* (I strike) is active, how could *je dors* (I sleep), *je meurs* (I die), *je souffre* (I suffer) be likewise ?

The distinction between the active and passive verb in most Indo-European languages, is illusory, because the passive is scarcely ever the inverse of the active. A special idea is generally introduced into the passive, which modifies its character. It often expresses an action accomplished—completely finished—and that is why so many French verbs express their past by means of the verb "to be". This was already the case in Latin. Furthermore, in this language, the passive had a special use improperly called impersonal passive, which should simply have been called the *impersonal*, for it contained no trace of the passive ; *curritur* "someone runs", *luditur* "someone is playing", *itum est* "someone went". The French in a similar case use the indefinite pronoun *on*, or turn the verb into reflexive form : *il se joue un grand jeu* (a great game is being played), *il se fait une grande course* (a great race is being run), etc. In French, as in many languages, the reflexive is one of the ways of expressing the "passive" ; *cela se dit, cette robe se porte.* The characteristic feature in all such expressions is that the real active agent is not expressed. They are not to be considered as passive forms, unless passive is to be understood in a special sense, not as the opposite of the active.

The confusion from which languages suffer is due to the secondary notions introduced into the expression of active and passive, so that the fundamental contrast between them is lessened. Is this fundamental opposition itself, however, justified ? Did the difference between *I strike* and *I am struck* lay only in the grammatical relations of the two persons involved it would be unnecessary to pay further attention to it. It

would be merely a conventional treatment due to habit or convenience. We should say *Peter strikes Paul*, or *Paul is struck by Peter* indifferently. Some languages would prefer to use the first form of expression, others the second, and still others would even admit both, and all this would be merely the result of historical processes. In fact, while French has an active and passive (the latter in a somewhat restricted sense), Indo-European seems to have known nothing but the active. Other languages, on the contrary, tend to reduce the voices to the passive alone.

There are, in fact, two ways of looking at the relations of the subject with the outside world : the subject may be active, that is to say, the action of his own will has a certain effect upon his surroundings (Peter *strikes* Paul) ; or may be receptive, that is, acted upon by his surroundings (Paul *is struck* by Peter). In these two examples the contrast is clear ; one gives the blows and the other receives them ; there is no possibility of doubt. There are cases, however, where activity and passivity are balanced and confounded ; others, where the second prevails over the first. If I say *Peter sees Paul* or *Peter likes Paul*, the action of the two persons is reciprocal and may be conceived as either active or receptive. Sight, for instance, is a receptive phenomenon ; Peter's retina is affected by a certain image. The same is true of love and friendship ; Peter feels a certain sentiment. There is nothing active in this. We realize that it would be more logical to reserve *active* verbs for cases in which the action produces a result and to employ another type of verb, which we might call *passive*, or *affective* according to our taste, for those in which the subject experiences a modification of his emotional sentiments.

This is practically the basis for the two large verbal categories in languages like Georgian.[1] Georgian has two types of inflection : *visurveb* " I desire ", and *msurs* " desire is mine ", *vikvareb* " I love ", and *mikvars* " love is mine ", etc. These two types have given rise to two parallel conjugations, the active and the affective, which Georgian employs conjointly in the same verb (usually by introducing at the same time a difference in tense) or, perhaps we should say, distributes among the verbs according to meaning. Thus they generally

[1] Examples taken from Finck, **CLXI**, p. 133 ; cf. also Schuchardt, **XXXIX**, vol. cxxiii (1895), pp. 1–91.

say *mesmis* "hearing is mine" ("I hear"), using the affective, but *vxédav* "I see" in the active; *mdzéra* "belief is mine" ("I believe"), *mgonia* "thought is mine" ("I think"), in the affective, but *vaseneb* "I build", *vtser* "I write" in the active, etc. In Indo-European languages this distinction is unknown.

Nevertheless, we have some notion of it in French, in the opposition between *je crois* and *m'est avis*, *je vois*, and *il m'apparait*, which are good examples of the difference between the active and the affective. In French the active is usually preferred to such an extent that a sentence like *il me souvient* ("I remember, i.e. it remembers me"), contrary to all logic, is turned into the active.

Je m'en souviens is both absurd and barbarous, and yet Vaugelas tells us that *il m'en souvient* was "preferred" at court. The same thing happened in the case of *regretter* (*je regrette* is derived from *il me regrette*, "*regret est a moi*"; cf. the Italian *mi rincresce*). It is the same in German with verbs like *ahnen* and *grauen*: (*Ich ahne etwas*, "I suspect something," is derived from *es ahnt mir* or *es ahnt mich etwas*; *ich graue mich vor etwas*, "I shudder at something," is used instead of *es graut mir vor etwas*); and in Latin the verb *pœniteo*, "I repent," came from *me pœnitet*, "I repent me."

The transition from the affective into the active also represents, in this case, the transition from the impersonal into the personal—some languages, however, prefer the latter. This preference is evident in Latin, where the personal passive comes from the impersonal passive: *inuidetur mihi* preceded *inuideor* "they are jealous of me", just as *uitam uiuitur*, "one lives one's life" (Ennius, *Trag.*, v, 190), preceded the form *uita uiuitur*, "life is lived." Similarly in Danish they say *jeg blev budt to kroner* "I have been offered two crowns", instead of *mig blev budt to kroner* (two crowns have been offered me); *jeg blev forbudt Adgang til . . .* "I have been refused access to . . ." instead of *mig blev forbudt Adgang til . . .* (access had been refused me), which would be the only expressions logically correct.

Thus we can see that the distinction between the active and passive categories rests on a very slight basis.

Nor is there a more solid foundation in the distinction between transitive and intransitive verbs, which plays so great

a part in classical grammar. It is constantly used by grammarians, and seems so natural to us that we hardly even trouble to define it ; we should say that it explains itself. As a matter of fact, nothing is more ill-defined. In Latin we call a verb transitive when it takes a direct object in the accusative (*amo patrem*) and in French when it is directly followed by an object without a preposition (*j'aime mon père*). Those verbs, on the contrary, are said to be intransitive whose object is in the dative in Latin or are preceded by the preposition *à* in French ; as for example, *noceo patri, je nuis à mon père*. The relation between *noceo* and *patri*, however, is exactly the same as that between *amo* and *patrem*. Indeed, we know that the difference in the construction is purely accidental. It is probable that *nocere alicui* developed by analogy with *obesse, officere alicui*. One of these constructions has led to the other. In the course of the development of any language, these constructions are seen to change, intransitive verbs becoming transitive and *vice-versa*.[1] In Greek the verb παραινεῖν is transitive in the classical period, but in the Acts of the Apostles (27, 22) we find παραινῶ ὑμῖν. Conversely, the transitive verb διδάσκειν has become intransitive ; ἐδίδασκεν τῷ βαλάκ, as found in the Apocalypse (2, 14). The dative is used after χρῆθαι in Attic prose, but the accusative occurs in Cretan inscriptions and in the Greek of the New Testament (χρώμενοι τὸν κόσμον, First Epistle to the Corinthians, 7, 31). In Latin *mederi* " to take care of ", governed first the accusative and then the dative (*mederi oculos, mederi oculis*). The same idea, finally, may sometimes be expressed either by a transitive or an intransitive verb. In French we say " j'*aide* ma mère ", " je *suis* mon père " ; but in German the construction is : " ich *helfe* der Mutter," " ich *folge* dem Vater." In Russian they say : " *blagodarjù* vas " like the French " je vous *remercie* ", but in German " ich *danke* Ihnen " ; and in Latin the dative is employed after *nubere, parcere, benedicere*, signifying " to marry ", " to forgive ", " to bless ".

For the grammarian who has to teach the language the distinction is doubtless justified, since he is dealing with two different constructions, and in saying *noceo patrem* or *ich helfe die Mutter* we are speaking incorrectly. But that is only a

[1] For the French of the sixteenth century, cf. Brunot, **LVIII**, vol. ii, p. 439.

difference in form. Even if history recognizes and explains it, reason does not justify it.

The opposition between transitive and intransitive verbs can be better expressed in the following way. From the moment the idea of the transitive postulates an object, we may call all those verbs transitive whose action has an end expressed in the sentence, and all those verbs intransitive which, on the contrary, can be used without such an object. Thus, for example, arises the opposition between such a locution as *j'aime Rose*, and *la maison où j'aime, cet homme boit du vin*, and *qui a bu boira*. Used without an object, the verb is intransitive, for the action expressed refers to no object. This contrast, however, although logical, could not be long adhered to without undermining logic itself. We meet it, for example, in expressions like " ils *prennent* ces allumettes " and " ces allumettes *prennent* ", or " le chien a *crevé* la toile " and " le chien a *crevé* ". But the cases are different. In the second sentence of each pair the verb (*prendre, crever*) is used in an absolute sense, and the action is related to the subject, whereas the verbs *aimer* and *boire* in the sentences where they take no object, express an indeterminate act. On the other hand, we might consider *je pars à Paris* as a transitive verb, since it refers to an object which marks the end of the action, especially as this same object is expressed in many languages (Latin, Irish, Greek, Sanskrit, etc.) by the accusative : Lat. *peto urbem*. But can the verb *partir* be treated as intransitive in *je pars dimanche*, where instead of a complement of place we have a complement of time ? The point needs a good deal of discussion. And how are we to distinguish the two sentences : *j'attends Pierre* and *j'attends à demain* ? How also are we to indicate the difference between *tournez la meule* and *tournez à droite* ? If we classify these verbs as transitive—and how else can we classify them ?—if we connect *tournez à droite* with *tournez le coin*—the same word might be said to designate two very different uses ; for in *tournez la meule* the verb is causative (make the grindstone turn), and in *tournez à droite* it is reflexive in the sense that the subject is at the same time the end of the action (turn you to the right). We have a similar case in the Latin *saepe stylum uertas* " turn your stylus often ", and *uerte hac* " turn here ".[1]

[1] Cf. Ernout, **VI**, vol. xv, p. 325.

The further we proceed with the analysis of grammatical categories in a language, the more clearly we see that it is impossible to refer them to any logical system. This can be explained on very good grammatical grounds, namely, that the grammar of each language, whatever point in its history we consider, is the result of multiple activities bearing independently upon the different points of the grammatical system. If the origin of morphological transformations lies in what is called analogy, the result of this analogy is certainly not to bring logic into the system (cf. p. 160).

Nothing, on the other hand, justifies the assumption that at a very early period in the history of a language the grammatical categories exactly correspond to the logical categories of the mind, and that in the course of centuries they have gradually altered little by little as a result of usage. However far we look back into the history of language, we never encounter any condition that is not highly evolved. The oldest known form of language spoken to-day is neither more nor less logical than the later ones.

It is always unwise to attempt to judge the mentality of a people by the grammatical categories their language possesses. There are languages which, for a very long time, maintain as grammatical processes categories which no longer have any justification for their existence. We saw an example of this in the category of gender. If we were confronted with a French sentence in which *table* was contrasted with *tabouret*, as though taken from some savage language, we might in fact believe that we were dealing with Bantu. M. Bally has given several striking examples of these resemblances, which use and the persistence of certain grammatical categories have established between civilized and savage languages.[1]

It sometimes happens that certain grammatical categories are abandoned or change their form, and that new ones are created. Some philologists have concluded from this fact that the human mind progresses towards abstraction. This conclusion is sometimes justified (cf. the final chapter). But we must not generalize. Indo-European had no infinitive; it could neither say " to carry " nor " to do ", but only " I carry " or " I do ". The creation of the infinitive effected independently

[1] **XLIV**, p. 107.

in each Indo-European language, was a great step toward the process of abstraction. And yet there are languages which have lost the infinitive—modern Greek, for example, and Bulgarian. This does not imply that a Greek or a Bulgarian has lost the faculty of conceiving a verbal action in an abstract way.

The fact that certain savage peoples have a trial number in addition to a dual does not imply that these people could count only to three.[1] The grammatical category of number is independent of the notion of number. M. Planert has shown likewise that the notion of causality must be distinguished from the grammatical categories which serve to express it; if the Malays do not express it, this does not prevent them from thinking causally.[2] There are, moreover, various processes of voice inflection and gesture which make up for the absence of certain categories.

If, at times, languages unreasoningly preserve useless grammatical categories they are never at a loss in creating new ones when needed. Further back we contrasted languages expressing tense with those expressing aspect. On the basis of the facts presented by the history of the Indo-European languages, we might say that the notion of tense is more recent than that of aspect, and has taken its place. Nevertheless, the notion of aspect is not unknown in those of our modern languages which best express the notion of tense.

For example, in order to express the durative, which they lack, the Germanic languages have utilized the present participle with the substantive verb as an auxiliary. In Middle High German there already existed expressions like: *all die mich sehende sint* "all those who see me" (*Der Arme Heinrich*, v. 673) or *der riter . . . mit tem der lewe varend ist* "the knight . . . with whom the lion travels" (*Iwein*, v. 2986). From the same need arose the English expressions *I am going*, *I was reading*, which are so extensively employed. We know that in the French of the sixteenth century an attempt was made to create a durative of the same type as the verb *être* or *aller*, but, as it was not countenanced by Malherbe and Ménage, it came

[1] Lévy-Bruhl, **LXXXVIII**, p. 157.

[2] Planert, "Die grammatischen Kategorien in ihrem Verhältnis zur Kausalität. Eine Untersuchung am Malayischen" (**XXXIV**, vol. ix (1906), pp. 759–68).

to nothing. Nevertheless, Voiture still used : *Cette prison qui va vous renfermant* and La Fontaine : *Je me vais désaltérant.*

French, which is distinguished from all other languages by the abundant means of expressing tense, has found two ways of denoting aspect, and for several centuries has been using them conjointly.[1] One consists in the use of the preverb *re-* to mark instantaneous as opposed to durative action. Thus, for example, *rabattre, rabaisser* do not signify to throw down anew or again, but simply that the throwing down followed the raising up, without reference to the time required for the actions. If the action remains present to the mind while it is going on and until it is accomplished, the simple *abattre* or *abaisser* is used. Similarly *réveiller* someone, is to see that he does not continue to sleep, that he awakes ; and *remarquer* something, is to see that this thing is and remains *marqué.* Everywhere in popular language the verb with *re-* tends to take the place of the simple verb, when only the result of the action is being considered. *Unir,* for instance, is now only used in describing the ceremony of uniting in marriage, otherwise we hear *réunir* ; *remercier* has replaced *mercier* (to thank), still used in the sixteenth century ; *ralentir* means " to slacken in speed " ; *ramasser* (to collect), *recueillir* (to gather), *regarder* (to look at), have assumed an altogether different meaning from *amasser, cueillir,* and *garder* : *rattraper* (to catch), is used in its proper sense ; *attraper* but rarely, except in a figurative sense. French people say *rapportez* or *remportez-moi ça,* for *apportez, emportez* ; *renfermez le chat, refermez la porte,* and " *rentrez* donc " for " entrez donc ", into a house which one never has entered ; " prends garde de *répandre* " (not so spill a liquid), etc. Such examples are already hoary in French ; in Aimeri de Narbone we already find expressions like : *ralez vos en* instead of *allez-vous en.* Here the prefix adds markedly to the expressiveness of the phrase. This process, so deeply-rooted in French, is to be found also in Latin, and comes from an earlier source still, for we meet with it in Germanic and Balto-Slavonic as well.

French, however, is not wedded to this process ; it has still another way of expressing the idea of aspect ; namely, by the employment of a reflexive verb. Compare *défiler, trotter* with *se défiler, se trotter.* Often the two are combined ; the

[1] D. Barbelenet, **XCIX,** p. 8 ff.

reflexive will be used with a verbal prefix, either *é-* or *en-*: *s'en aller, s'enfuir, s'envoler, s'écrier, s'écrouler,* etc., are all good examples of this when compared with the corresponding simple verbs. Thus, it cannot be said that French is incapable of expressing aspect, since it finds a way of doing so as soon as the need arises. Aspect, however, is not a regular grammatical category in French. We cannot take a certain verb and point out its durative or iterative form as we could point out its future or imperfect. There are languages, such as Russian, in which the concept of aspect preponderates so far as to become the main principle of the whole verbal system; but in French, as in Latin, it is but an isolated survival, or responds only to an accidental need.

There are certain important differences between grammatical categories in different languages. No morphological system ever comprises more than a limited number of categories which acquire a dominant position and overrule it. But into every system there enters some contradictory element belonging to another system which represents, side by side with fully established categories, others which are in course of either disappearance or formation.

On the other hand, a certain hierarchy can be established among these categories; some are only particular aspects of more general categories. Hence, we could speak of the active and passive as though they were two grammatical categories; but both can be easily referred to one. It is true that a language which does not use the active could not translate "I love you", for example; but by that we mean that it would only be unable to translate this sentence *word for word*; the relation we express by the use of the verb called "active" would simply be expressed in a different way.

Similarly, what we understand by a Greek or Latin genitive is a grammatical category having no analogy in Chinese; but neither has it any in French or Welsh. The French say, *le livre de Pierre* instead of *liber Petri*. Chinese expresses the relations between the two substantives by the order in which the words are placed, putting the word governed before the word which governs: *Han tchaou* (the Han dynasty). In Welsh the order is reversed: *aber yr afon* (the mouth of the river) (cf. p. 79). It would be as absurd to speak of a Chinese or Welsh genitive as of a French one. In Latin, however, we know

that the adnominal genitive can be replaced by an adjective ; one can say *uirtus Cæsaria* instead of *uirtus Cæsaris*. This has become the rule in Russian. In French, likewise, the type *le livre de Pierre* is not the only one in current use : *le palais royal* or *les livres sibyllins*, *la maison à Pierre* or *la vache à Colas*, *l'hôtel Dieu* or *la rue Gambetta* are equally common. So that here, too, we have more than one grammatical category for expressing a particular logical category. German has a genitive both in *Vaters Haus* and *das Haus des Vaters*, but it can also say *meinem Vater sein Haus*, which is quite a different kind of expression (see p. 151). Bearing in mind these differences derived merely from the way in which the verbal image is constituted, we might posit a single general category for all the languages mentioned, namely, a category of dependence. It would embrace the Latin and Greek genitive just as well as the Chinese and Welsh word-order, or the use of the preposition *de* in French.

This category of dependence which to us seems a single entity itself contains subdivisions that are logically justifiable. Thus we say in French, *sa beauté est éclatante* or *la beauté en est éclantante* according to whether we are referring to a woman or a painting, or, in general terms, to a person or to an inanimate thing. But we say indifferently, *le père de Pierre* and *la culotte de Pierre*, without thinking that there may be a difference in the respective relations these words bear to each other. On the other hand, a West African language, Mandingo, distinguishes *a fa* " his father ", from *a-ta kursi* " his breeches " : the possessive is different in the two cases because the father does not belong to his son, whereas the trousers do belong to their possessor.[1] The category of dependence in such a language is further complicated by a distinction between belonging and non-belonging. In French this distinction is not made, legitimate though it may appear upon reflection.

The disaccord between grammar and logic is due to the fact that grammatical and logical categories are rarely parallel.

Scarcely ever is their number the same. When we try to bring order into grammatical facts by classifying them logically, we are apt to make an arbitrary distribution ; some-

[1] M. Delafosse, **IV**, vol. xviii (1913), p. cccxliii.

times we place under different logical categories facts which have the same grammatical aspect—and this is doing violence to the language—while at other times we group under the same grammatical category facts which have nothing in common from a logical point of view—and this is doing violence to reason. The simplest way, then, is to choose between the two classifications. That justifies the procedure of the grammarians, whose nomenclature, arbitrary and often illogical, has, however, a grammatical value. The one thing we must demand of them is that their classifications, if logic be sacrificed, should at least correspond to the grammatical conditions of the language they are studying. Although categories may vary in different languages, they have, in fact, in the particular language to which they are in vigour, a power that dominates the intelligence.

It is the logician's business to define the logical categories, to decide whether behind the medley of grammatical categories there are logical ones valid for and imposed upon all languages, by the structure of the human brain. Imagine this question being put to a man of the seventeenth century, imbued with the Cartesian philosophy and the logic of Port-Royal ; he would not have hesitated to answer in the affirmative. " Good sense is the most widely distributed quality in the world," said Descartes, " . . . it is the only thing which makes us human, and distinguishes us from the brutes ; I desire to believe that it is completed in every individual." And La Bruyère, advancing upon the thought of the master, wrote : " Reason is universal, and its reign acknowledged wherever there are human beings." This conception of the human mind, ruled everywhere by the same immutable laws, was accepted by everyone at that time. To-day it would seem debatable.[1]

Nevertheless, whatever may be the difference between the mental habits of different peoples, the existence of certain fundamental traits is undeniable. Logic, together with certain broad logical categories, is common to all thinking men. These logical ideas are naturally at the bottom of grammatical categories. Whence do the one and the other derive their validity ?

Émile Durkheim [2] attributed the existence of categories to a

[1] Lévy-Bruhl, **LXXXVIII,** p. 7.
[2] **X,** 1909, p. 747.

sort of necessity which is to intellectual life what moral obligation is to the will; that is to say, categories are of social origin and dependent upon society. Here we encounter once more the influence of the social factor, already so manifest in the origin of phonetic transformations. This factor alone can explain the phonetic laws. The necessity that obliges all members of the same group to articulate in the same way has neither a physical nor a metaphysical origin. Nor is it better explained by the notion of a generalized individual accident: there is no authority sufficiently strong to compel people to imitate an individual peculiarity. Phonetic constraint is so strong that no single individual can escape its yoke. So it is with categories. Both draw their constraining force from that of the social bond.

CHAPTER III

Different Kinds of Words [1]

THE difficulty of classifying the parts of speech is so great that no satisfactory arrangement has yet been made. According to a tradition which goes back to the Greek logicians our classical grammar teaches that there are ten. This classification, however, does not bear examination. There is considerable difficulty in applying it even to the language for which it was made, so that it is not surprising that there are many languages to which it cannot be adapted at all. When it is closely examined we find that it has to be modified.

First of all, we shall have to set aside interjections. However important the interjection may or may not be in current usage, it is inherently different from the other parts of speech, and cannot be put in the same classification with them. It does not always obey phonetic laws, and often includes phonemes of its own, such as the " clicks " found in many modern languages, or the French fricative *pff*. In general it has nothing to do with morphology. It represents a special linguistic form, affective or sometimes active language. In any case, it remains outside the structure of intellectual language. We shall deal with it again in the following chapter.

Next we must place morphemes aside. A fair number of our grammatical " parts of speech " are nothing else, for example, than particles known as prepositions and conjunctions. Their rôle may be filled in other languages by an entirely different morphological process. French uses the form *le livre de Pierre* to translate the Latin *liber Petri*. The French " on disait *que* le comte était mort " corresponds to the German " man sagte, der Graf *sei* gestorben " (it was said the count was dead). The use of the subjunctive suffices to indicate the character of the subordinated clause. Even in the same language the morphemes may be used in different ways. German also uses " man sagte, dass der Graf gestorben ist " (or " sei "). In Latin, the two expressions *rogo venias* and *rogo ut venias* are both used.

[1] See Rozwadowski, **CXCIII**; Jespersen, **CCXXIX.**

French, for long employed *le bois le rois* and *le bois la dame*, side by side with *le chemin du bois* and *l'arbre de la forêt*. The words *de*, *que*, *dass*, *ut* are morphemes serving to denote the relation existing between the words and sentences. In general, conjugations and prepositions have different forms. Nevertheless, there are languages where certain relations between words and between sentences are expressed in the same way. In Chinese, the element *ti* serves to mark dependence in both nouns and clauses (see p. 84).

Where the article exists, it is also merely a morpheme. As a rule it is nothing but a demonstrative, greatly diminished in its significance, and serving as a classifier ; it marks the gender or number of nouns, and, oftener still, acts as a determinative (see p. 116). It has all the characteristics of a grammatical device.

The same is true of the personal pronoun : *je lis* is equivalent to the Latin *lego*, just as *tu lis*, *il lit* are to *legis*, *legit*. French expresses by *je*, *tu*, *il*, what Latin expresses by inflections. When the pronoun is independent or, as we should say, emphatic, it is playing the exclusive rôle of a substantive, and ought to be grouped in the category of nouns. Let us compare the two sentences *Viens-tu, toi* ? and *Viens-tu Pierre* ? or *Moi, je suis grand* and *Pierre, il est petit*. The pronouns *toi*, *moi*, and the substantive *Pierre* have the same value. It is true that in certain respects the personal pronoun approximates to the verb. As it often plays the part of a verbal morpheme, one is inclined mentally to classify it with verbs, and thus model it on verbal analogy.[1] Thus, in Italian, the pronouns *eglino*, *elleno* have taken on the endings which correspond to the third person plural of the verb ; similarly in Welsh they say *hwynt* (them) instead of *hwy*, following the model of the verbal ending *-ynt*. On the other hand we know that the languages which have kept the dual in the verb have retained it also in the pronoun, even if they have dropped it in the noun. Conversely, those languages which no longer possess a dual in the verb, have likewise abandoned it in the pronoun, even if it still persists in the noun (see p. 97). Hence, the pronoun, although used nominally, is sometimes subject to the influence of the verb, but it does not form an independent part of speech.

[1] Johann Schmidt, **XXXVII**, vol. xxxvi, p. 403.

The adjective again, is often very poorly distinguished from the substantive. In the Indo-European languages both appear to have sprung from a common origin, and, in many cases, to have preserved an identical form. In Latin, or Greek, nothing distinguishes *bonus* ἀγαθός as adjectives, *equus* or ἵππος as substantives ; the inflection is the same in both cases. It is use, of course, that betrays their true characters (see p. 130). But we must not forget that they are sometimes equally well adapted to the same use. We can say : " je suis *fort* " as well as " je suis roi ", " un homme est *grand* " and " in grand est *homme* ". Substantives and adjectives are interchangeable in this way in all languages, and, from a grammatical point of view, there is no clear-cut boundary between them. They may both be grouped together in a single category, that of the noun.

Pursuing this process of elimination, we end by leaving intact only two " parts of speech ", the noun and the verb. The other parts of speech all fall within these two fundamental classes. It remains only to discover whether the verb and noun represent two essentially different functions.

To judge solely by certain languages, such as the Indo-European group, we should not hesitate to recognize a fundamental difference between the verb and the noun. The very idea of confounding the two would seem ridiculous. Indo-European morphology presents, in fact, a different series of suffixes and formatives for each. In nine cases out of ten we can recognize immediately whether a Sanskrit or old Greek form belongs to a noun or verb. The same category has a different expression for each : person or number, for example. Greek uses λέγω for " I speak ", and ὁ λόγος μου for " my speech " ; the sign for the first person differs in the two cases. The plural noun and verb formatives have likewise nothing in common. In a sense there are two parallel morphological systems independent of each other.

But as soon as we pass from the Indo-European to the Semitic languages, this clear-cut distinction cannot be maintained. Arabic does not lack formatives to the declension and the conjugation ; the formative *ūna* which is used for the masculine second and third person plural of the imperfect, serves to mark the plural of most of the words in the language that are masculine. For the same persons and the same tense,

the dual formative *āni* is the sole dual formative of nouns. This relation between the declension and conjugation is not limited in Arabic to certain similarities in the formatives; it is evident in the very basis of the system. There is a striking parallelism between the three noun cases (subject, direct, indirect), and the three moods of the verb in the imperfect (indicative, subjunctive, conditional [or, according to other grammarians, apocope]). The Arabic grammarians themselves recognized this parallelism and translated it into the terminology they created.

In the Finno-Ugrian languages, the verb and noun have so many points in common that we might almost say, though this would be incorrect, that they are indistinguishable. The fact is that the verb here often seems to be nominal in origin, and is still sometimes affected by the same morphological elements as the noun. There are common suffixes.[1] In Wogulian *mini* " he goes ", *ali* " he kills ", are formed like *puri* " taking ", *uri* " holding "; Finnish, *antaa* " he gives ", really signifies " giving ". This is merely the result of employing the pure nominal form of sentence (see p. 122). But the presence of common formatives is of greater importance. In Chermish and Mordvian, the *-t* forms both the plural of nouns and the third person plural of verbs, and it is not only to Finnish that this practice extends, where *menit* " they went ", *menisit* " they will go ", is seen alongside of *meni* " he went ", *menisi* " he will go "; similarly *kalat* " fishes " exists alongside of *kala* " the fish ", and *puut* " the trees " alongside of *puu* " the tree ". The same kind of thing occurs in Hungarian; *vártak* " they have waited ", *kértak* " they have asked ", are the plurals of *várt* " he has waited " and of *kért* " he has asked "; as *hársak* " the lindens ", *névek* " the names ", are the plurals of *hárs* and *név*. There is nothing comparable with this in Indo-European.

Finally, there also exist other languages such as those of the Far East, where the indetermination of noun and verb passes for one of the fundamental dogmas of grammar. In classical Chinese, in fact, the same words can be used either as a noun or a verb; the position of the word alone denotes in which sense it is used. A classical example occurs in the sentence *lao lao, yeo yeou* " to treat old people as old people, and children as

[1] J. Szinnyei, **XXVIII,** vol. v (1905), p. 62.

children", where the word denoting *old person* (or *child*) employed as a substantive likewise expresses, as a verb, *to treat as an old person* (or, *as a child*). Such striking examples as these, however, are rare. Generally, whenever the word is to be used as a verb it is accompanied by a change of tone, and hence, if necessary, by a mutation of the initial consonant, which mutation is expressed to-day by the difference between a non-aspirate and an aspirate. For instance, *hao'* "good" and *haó* "to love"; *tsáng* "treasure" and *ts'âng* "to hide", *chūán* "commentary", and *ch'ūân* "to transmit". In modern current usage there are other ways of distinguishing directly between the verbal and substantive function. Irrespective of the word-order and the importance of the order of succession—*subject—verb—complement*—the affixes which determine the character of the words will generally enlighten one; for nouns the affix will be *eul* or *tseu* (see p. 84); for verbs *cho* (derived from *chao* "to apply or put"), as, for example, *tso cho* "to seat oneself", or *chao cho* "to put on (a garment)", and, better still, the affixes of tense, *leao* or *kouo* for the past, and *yao* for the future.

If it so happens that the same Chinese word can be used either as verb or noun, the speaker clearly marks the difference between these two parts of speech. The Chinese grammarians distinguish among "full" words (see p. 84), those that are "living" (*houo tsu*) and those that are "dead" (*ssen tsu*); the first, they say, have an active meaning and the second a passive. Substantives and adjectives are included among the dead or passive words, whereas verbs, which imply action, are living or active. As a corollary to this principle, when a verb is used in a passive sense it may take the same intonation as the noun; by a change of tone it becomes a dead word. Hence this indeterminateness of noun and verb usually attributed to Chinese is more apparent than real. There is never any doubt as to the substantive or verbal value of the word used. A language very much akin to Chinese in this respect is English. Most English substantives can be equally well employed as verbs and the language tends to admit the use of any noun as a verb. A word like *fire* may be either a noun or a verb; it may even, as a noun, act either as adjective or substantive; and, as a verb, it leaves the exact active or passive shade of significance indeterminate. It is really an abstract idea which lends itself

to any concrete application desired. Witness the following sentences, where the word, though it modifies its meaning, yet undergoes no change in form : *put the pistol on the fire* ; *I fire the pistol* ; *a fire-fly* ; *O people, so easy to fire !* And how many English words can be used in the same way ! From the substantive word *frown* is derived *to frown* ; from *book, to book,* from *bomb, to bomb,* etc.

And yet we must not allow ourselves to become the victims of an illusion. No doubt *fire* is, in principle, either a verb or a noun. It is none the less true, however, that the idea of a fire which burns is distinct from that of making a fire in order to burn. If I say " there is a fire ", or " fire this ", I have in mind two distinct ideas that produce two different reactions in the mind of my hearer. In the first case, I make a statement, in the second I order an action. There is no more hesitation in English than in Chinese about the value of a word such as *fire* when there is occasion to distinguish between two such sentences. The hearer immediately recognizes the word as a noun or a verb by the way in which it is used in the sentence, and especially from the morphemes accompanying it. According to whether I say *a* (*the*) *fire* or *to fire, my fire,* or *I fire,* I indicate whether the word is a noun or verb. The difference of the morphemes alone is sufficient to mark the different values of the word beyond possibility of doubt. The morphemes *a* (*the*) or *I,* here play the part of the formatives in a language like old Greek ; *I fire* is *αἴθω* and *αἴθος* is *a* (*the*) *fire.*

The distinction between verb and noun, which is not always apparent in an English or Chinese word standing alone, is revealed as soon as the word is placed in a sentence ; it is not a question of form but of use. In other words, we must go back to the formation of the verbal image, where the elements of the parts of speech are combined, in order to justify the distinction between verb and noun. Although there are languages where the noun and verb have no distinct forms, all languages are at one in distinguishing the substantive from the verbal sentence.[1]

The verbal sentence expresses an action with reference to a certain time, within a certain duration, attributed to a certain

[1] Cf. particularly Meillet, **VI,** vol. xiv, p. 1 ff.

subject, and directed, if necessary, toward a certain object. " *Listen* to the music," " Peter *drank* some wine," " the horse *will draw* the carriage," etc. The object of the verbal sentence is to command, to state, or to picture an action. The imperative, the indicative, and the subjunctive—to which we must add the future and the conditional—represent these three aspects of the verbal sentence quite clearly. Such a sentence may consist of a single word : the French word *prends* (hold), Latin *ueniam* (I will come), Greek τέθνηκα (I am dead), Arabic *kālu* (it is said). It may also happen that this single word is a substantive. When the French say " Feu ! " " Halte ! " " Place ! " or when in English we say " Silence ! " " Attention ! " we are giving orders for an action to be carried out, just as when the French say " Prends ", or when in English we say " Come " or " Stop ". Logically, the verb expresses the action. But the imperative belongs only partially to language in its logical sense. It is the active mood of language (see p. 137) and can be expressed by a cry. We impose silence by saying " ssh ! " : we make a horse go by making a kind of clucking sound. These are imperative formulæ which do not belong to the grammatical system of the verb.

The analysis of the verbal sentence furnishes us with a sort of hierarchy of verbal forms. First we have the imperative, which in certain respects remains so entirely outside the organized verb that it may be expressed by a noun or, more frequently, by an infinitive ; then, the indicative (present or past), which states the existence of a fact ; finally, the moods of contingency or conjecture.

Entirely different is the substantive sentence by which we express the attribution of a certain quality to a certain object : " the *house* is *new*," " *lunch* is *ready*," " the *entrance* is *on the right*," " *Cyrus* is *king*," " *Zayd* is *wise*." The substantive sentence comprises two terms, the subject and the attribute, both of which belong to the substantive category. The Aristotelian logicians were well aware of the difference between the two types of sentences ; but they reduced them to a single type by breaking up the verbal sentence so as to introduce the substantive verb : le cheval *court*=*le cheval* est *courant*, or the brook *flows*=the *brook* is *flowing*. Few errors have been so persistent. This one has been fortified by its metaphysical connotations. Philosophers, deceived by the title " sub-

stantive" verb, predicated a false opposition between the substantival character of that which is expressed by the verb and the accidental character of the attributes. A complete logical edifice was built up on the primordial quality of the verb *to be*, considered as the essential link between the major and minor terms of every proposition, the very expression of the affirmative and the foundation on which all reasoning must rest. But Philology, far from supporting this scholastic edifice, has cut its foundations from under it. The testimony of most languages indicates that the verbal sentence has nothing to do with the verb *to be*, which itself was only introduced as a copula into the substantive sentence at a fairly late date.

The normal type of the substantive sentence in Indo-European has no copula, and is known as the substantive sentence in its pure form. The attribute is simply placed next to the subject, the respective order of the two elements being fixed in each language by special rules. Thus, in old Greek, we find regularly used: *κρείσσων γὰρ βασιλεύς* (for the king [is] stronger) (*Iliad*, I, v. 80), *πὰρ ἔμοιγε καὶ ἄλλοι* (others [are] near me) (ibid., v. 174); and in Old Persia: *manā pitā Vištāpsa* (my father [is] Vishtaspa), or in Sanskrit *tvám vârunas* (thou [art] Varuna). The pure substantive sentence has been preserved in Russian, where they say *zavtrak' gotov'* (breakfast [is] ready), or *dom' nov'* (the house [is] new). The adjective here has the form of the attribute; "the new house" can be otherwise expressed as *dom' novy*. In Old Irish the same opposition is indicated by the position of the two terms: *infer maith* (the good man), but *maith infer* (the man [is] good); French conveys the same idea in such a contrast as *les marrons chauds* (hot chestnuts) and *chauds, les marrons* (hot the chestnuts [are]). In Chinese this opposition is constant: *ta kuok* "the great state", as against *kuok ta* (the state [is] great).

The pure substantive sentence without copula is known in most languages, it is commonly used in Semitic and Finno-Ugrian. Arabic has: *zaydun 'alimun* (Zaïd [is] wise), and Hungarian: *az ég kék* (the sky [is] blue).[1] The pure substantive sentence is so extensively used in Finno-Ugrian that the persistence of this type of sentence in Russian has been attributed to the influence of the languages of that family.[2] In the Bantu

[1] Szimonyei, **CCXI**, p. 403.
[2] Gauthiot, **VI**, vol. xv, p. 225 ff.

group of languages the pure substantive sentence is also the rule.[1] Thus in Swahili we have : *simba mui* (the lion [is] bad). Here the adjectival attribute is indicated by the stress on the syllable *mu-*. In order to denote still better the relation between the two terms a pronoun is sometimes introduced between them : *mti u mkulu* (the tree [is] large), or literally : " tree-him-large," which leads the natives to say *l'homme lui fort* (the man-him-strong) for *l'homme est fort* (the man is strong) when they speak French. This pronoun is often replaced by the indeterminate and non-variable pronoun *i*, which, combined with various demonstrative elements, ends by becoming a sort of verb-copula in Swahili : *mti ni mkulu* (the tree is large).

We may here watch the actual living process by which a verb copula comes into being. In the Indo-European languages the copula is generally an old independent verb which has lost its own actual sense (cf. p. 165), and the introduction of the copula into the substantive sentence is easily explained. There is indeed one concept which cannot be explained by the mere association of subject and predicate—the notion of time. The verb, in so far as it is a symbol of time-relation, then became necessary. In order to translate " the sky was blue " Hungarian is forced to use the expression *az ég kék vala*, adding the imperfect of the substantive verb, which serves to indicate the past, while acting at the same time as a copula. And Homer uses the future ἔσται in τὸ δέ τοι ξεινήϊον ἔσται (this will be thy gift of hospitality), because it is necessary to indicate time. Mood is also one of the concepts which belong to the morphology of the verb ; hence the necessity to introduce a copula into the sentence where mood has to be indicated : εἷς δέ τις ἀρχὸς ἀνὴρ βουληφόρος ἔστω.

Having once been imparted into the substantive sentence when mood or tense has to be expressed, the copula is sometimes introduced even when it adds nothing to the sense. Thus, in Latin, the pure substantive sentence is exceptional, the normal type having a copula : *Deus bonus est, avarus est homo.* Similarly, in French (*les marrons sont chauds*), in English, *life is short*, in Armenian, and in certain Slavonic languages other than Russian, etc. Hence certain grammarians have concluded

[1] Sacleux, **XI**, vol. xv, p. 152 ff.

that the copula was the original element of the sentence. The very history of words proves that it was nothing of the sort. In all Indo-European languages the copula has been taken from root verbs which have gradually lost their meaning. For example, the root *es-*, which supplied the copula at a very early period, really signifies existence or life ; the participle *sat*, in Sanskrit, means a living being, and its derivative *satyas* means " true " ; in Greek, *τὰ ὄντα* signifies " reality ". We can follow the process of degeneration which reduced the verb of being or existence to the mere rôle of a copula.

Many languages, however, were not satisfied with the root *es-* in this rôle.[1] Quite a number of substitutes for the verb " to be " are used as copulas. One of the most extensively used is a verb whose proper meaning is to grow, increase. It has retained this meaning in the Greek *φύειν* ; but *bhávati* in Sanskrit has acquired the meaning of " it becomes ", and finally " it is ". In Old English *béo* signified " I am ", like *biu* in Irish ; Latin derived its preterite *fuit* " he was " from this root, and Slavonic derived from it a series of substantive verbal forms (*byti* " to be ", *bychŭ* " I was ", etc.). Still other roots have been placed under contribution : in Greek *γίγνομαι* " I become " is closely akin to the verb " to be ", like the Latin *uersor*. Latin *stare* was the source of the French imperfect *j'etais* ; and from a root signifying *to inhabit* (Sanskrit *vásati* " he dwells ") Germanic has taken some of the forms of its substantive verb (Ger. *ich war, gewesen*). Russian, perhaps, contains the greatest variety of substitutes for the verb " to be ". According to the exact shade of meaning required, it employs *sidjêt'* (to be seated), *ležât'* (to be lying down), *stoját'* (to be standing), *sostoját'* (to becomposed), *predstavlját' soboiu* (to appear as), etc.[2] However, the sentences in which these verbs are used are only partially substantives, for the significance of the copula, which is fundamental to their use, is overlaid with shades of meaning derived from the real meaning of these verbs. They are akin to sentences frequently in old languages, where the adjective-attribute was attached to some verb : Gr. *κόλακες ἀκούουσιν* (they heard themselves called flatterers), Gr. *χθιζὸς ἔβη κατὰ δαῖτα* (he went to the feast

[1] See J. and E. Marouzeau, **C,** p. 151, and bibliography quoted.
[2] Boyer-Spéranski, **LIII,** p. 249 ff. Substitutes equally varied are frequent in Polish.

yesterday) ; Lat. *ibant obscuri* (they walked in the dark) ; Old Slavic, *pade nicĭ* (he fell down).

We might call such sentences substantive-verbal, for they combine the characters of the two types contrasted above. Fundamentally they are substantive sentences into which a verb has been introduced. Conversely, there are verbal-substantive sentences, in which the verb has been replaced by a substantive locution, as in the examples given in the preceding chapter, such as *il m'est avis*, instead of *je pense*, or the Latin *opus est mihi* instead of *egeo*. Certain languages are particularly addicted to these verbal substantive sentences. At the two extremes of the Indo-European domain are to be found two groups in which verbal substantive sentences are commonly used : the languages of India on the one hand, and on the other the Celtic tongues of Ireland and Great Britain.

In classical Sanskrit, and as early as the language of the Mahâbhârata, there is an obvious tendency to replace the personal forms of the verb by a participle, accompanied, if necessary, by some form of the copula. It is not so much a substitution of the substantive for the verbal sentence as an encroachment of one upon the other. For the idea which is to be expressed remains a verbal appanage ; it is an action or a state, not a quality. For instance, as when we say : *kva yūyam ušitās* (Patanjali) (where have you been living ?) with the participle *ušitās* in the nominative plural instead of *ūša* the second person plural of the verb. The proportion of sentences of this type increases with time ; it is considerable in classical Sanskrit, where the use of participles is a characteristic feature. The development of the participial sentence has favoured the substitution of the passive for the active in a number of cases (see p. 102). For example, in the prose passages of the Mahâbhârata there are already sentences such as *mayā vṛta upādhyāyas* (I have chosen a master)—literally, " by me [has been] chosen a master," *tvayā parāddham* (thou hast committed an error)—literally, " by thou [it has been] wrong done," *avābhyām apūpo dattas* (we two have given a cake)—literally, " by us two a cake [has been] given."

In Celtic it is the infinitive which is developed to the detriment of the personal forms. The words in a sentence which express action are substantive rather than verbal in form. Thus, in the following sentence, taken from the Welsh of the Mabino-

gion : *gobeith yw gennyf, y neges yd eloch ymdanei, y chaffel* (I hope you will succeed in the affair you are about to negotiate —literally, " hope is mine, the affair that you will go, on the subject of it, its obtain "). A similar example is to be found in modern Irish in the celebrated tale of Diarmuid and Grainne : *creud adhbhar na moichéirghe sin ort* (why hast thou risen so early ?—literally, " what cause of this early-to-rise by thee ? "), or again : *na biodh fios ar d-turais ag aon duine go teacht tar ais duinn aris* (let no one know that we are away until we have returned—literally, " that there be not knowledge of our journey to no man till the return of us anew "). The Celtic verbal nouns are so closely related to verbs that they admit of the verbal prefixes characteristic of the tenses of the conjugation ; for example, the verbal prefix *ry* indicates the past, and in Middle-Welsh one can say : *gwedy clybot yn Rufein ry oresgyn o Carawn ynys Brydein* (when it became known in Rome that Carawn had conquered the Island of Britain—literally, " after to make known in Rome to have conquered by Carawan the island of Britain ").

Among the various uses of the noun and verb are some that are opposed and represent two different forms of thought, but there are also some which harmonize and end by running into each other. The link between the two consists in the substantive verbal and verbal-substantive sentences under discussion above. The essential element in these sentences is a word that is partly noun and partly verb. Sometimes it is a verb of the category called in Chinese " passive " (see p. 119) ; sometimes a noun of verbal, substantive or adjectival character denoting action, that is to say, an infinitive or a participle. Sanskrit and Celtic show by the use of these verbal nouns that in certain cases a verbal idea may be expressed by a noun. The possibility is well known to all those who have been concerned with the translation of a Greek or Latin text. In French schools rhetoricians are taught the art of substituting sometimes a noun for a verb, or vice versa, whether for the sake of adhering more closely to the word order of an ancient text, or for the sake of elegance and euphony. Therefore, it will be as well to examine more closely the value of verbal nouns.

Infinitives are, properly speaking, nouns of action, but all nouns of action are not infinitives. In most of the Indo-

European languages there are nouns of action formed by special suffixes which characterize them as such. Generally, they are directly joined to a verbal root and, to some extent, form part of the verbal system. They have kept more than one trace of this close contact with the verb in declension, and conjugation, for instance. We know that the noun is syntactically distinguished from the verb by the fact that it takes an object in the genitive instead of in the accusative. But there are languages in which the object of the noun of action is put in the accusative. Old Latin has preserved a trace of this use, for in Plautus there are sentences such as: "quid tibi *nos tactio'st?*" or: "quid tibi *hanc rem curatio?*"

The participle, likewise, falls into the more general category of nouns denoting the person concerned in the action, that is to say, he who accomplishes it or suffers it, according to whether it is passive or active. These nouns are known as agentive nouns. In general, however, the form of the agentive noun like the noun of action does not, by its form, show difference in voice (see p. 126). The participle sometimes shows the verbal inflection in the accusative; thus, for example, the Latin sentence *imitatus est eum* (he imitated him) is written *imitor eum*. This inflection is often extended to other agential nouns that are not participles; we find in Plautus: *orator iusta* (he who asks for righteous things). This must have been a popular expression in Latin, since it reappears later: *peccatorum ueniam promittor* (he who promises the forgiveness of sinners). But this form is found in still other languages; in Sanskrit: *dâta vásūni* (he who gives goods); in Old Persian: *ahuramazdā ouvām dauštā biyā* (that Ahuramazda may love thee—literally, "be lover, thee"); in Zend: *puθrem varšta* (he who begets the son); Greek πολλὰ συνίστωρ αὐτοφόνα κακά (Æschylus Agam. 1090) (accomplice of a large number of criminal suicides).

The nouns of action and agentive nouns, which are generally characterized by special morphemes (see p. 82), are always quite distinct. They constitute, within the general category of the noun, two special clearly defined sub-categories. With them we might include the instrumental nouns and those expressing the result of an action. Instrumental nouns also frequently take special suffixes: for example, -τρον in Greek *-trum* or *-clum* in Latin; and these suffixes are added to verbal

roots; ἄροτρον, *aratrum*, designate the instrument used in ploughing, the "plough", as *poclum*, the vessel used for drinking, designates the "cup". These words are thus closely related to the agentive nouns both in meaning and form, as is shown by the comparison of the suffix *-tro-* of instrumental nouns and the suffixes *-ter-*, *-tor-*, of the agentive nouns.

As for the nouns expressing the result or object of an action, their source is generally the noun of action itself. *La coupure* the result of *couper*, *pâture* the result of *paître*, *bordure* the result of *border*. The word *coupure*, however, is used to designate the gash a child makes in his finger with his pocket knife, or the cutting from a newspaper; *la pâture* applies to the fodder eaten, and *la bordure* to the outside of a garment or a grass-plot. Thus, most of the French action-nouns can be used as object-nouns. All Indo-European languages furnish examples of this.

The categories we have reviewed include a considerable number of common nouns. Many of these common-object or animal names are, in fact, old nouns of action or agent or instrument, which have been specialized. The participial or verbal adjective, which is only a more generalized form of the agentive noun, has been the source of a large number of common nouns; *serpens* (the serpent) is "the crawling one, that which crawls"; the Greek ὀδούς, Latin *dens* (the tooth) is "that which eats", as in Sanskrit, *radanas* (the tooth) is "that which gnaws" (*radati* "he gnaws"). All these nouns attaching to verbal roots are easily interpreted as having derived from the verbal sentence.

In the substantive sentence we find the exact counterpart of the action noun in the verbal sentence—namely, an abstract noun of quality. Take, for example, the two sentences *I worship God* and *God is good*. *Goodness* is the quality of being good, and *worship* is the result of worshipping. The abstract noun thus comes naturally from the nominal sentence. There are cases in which the abstract noun and the action noun are closely related—for instance, when the action noun is connected with a verb whose meaning is passive rather than active. Verbal sentences containing verbs of this kind, therefore, approximate to verbal substantive sentences mentioned on page 125, and may interchange with them. In Danish, for example, the action noun corresponding to the verb *elske* (to love) is *kjærlighed* (tender-

ness—the quality of being *kjærlig* or "tender"). In French *l'endurance* is both an action noun and an abstract noun. From the verbal sentence *Pierre endure la faim* (Peter endures hunger) we get "*l'endurance* de la faim" (the act of enduring it); but from the substantive sentence *Pierre est endurant* (Peter is enduring) we get: "*l'endurance de Pierre*" (the endurance of Peter). *L'endurance* is therefore the quality of being *enduring* as *clemency* or *patience* are the qualities of being *clement* or *patient*.

From the category of abstract nouns we pass to that of the concrete nouns, for the former is frequently used in a concrete sense. The force expressed by the abstract idea seems to be easily grasped by the mind. The suffixes characteristic of abstract nouns like *-tut-* or *-tat-* in Latin, *-té-* in French, *-ung-* in German, are also found in concrete nouns. In such cases the passage from the abstract to the concrete is often merely a substitution of the image for the idea. In actual usage this substitution is facilitated sometimes by the employment of the word in the plural and sometimes by its use as an epithet. For example, *uirtutes*, the plural of *uirtus* "virtue" is applied to virtuous acts (commonly used in ecclesiastical languages in the sense of "miracles"); the plural of *laus* (glory)—*laudes* signifies "praises, flattering or laudatory actions or words". *La largesse*, la *complaisance*, awaken abstract ideas; *largesses*, *complaisances*, are concrete notions, facts which realize the abstractions. It is the plural use which thus transforms the value of the word. Its use as an epithet is no less efficient; for example, *douceur* is the quality of being *doux* or sweet, but it can also be a sweet (*douce*) thing—"ce remède est *une douceur*." In German, likewise, the abstract words *Bescherung* (act of offering, gift), *Schande* (shame), are applied to objects in such sentences as: "das ist eine schöne *Bescherung*," "dies Verfahren ist eine *Schande* für eine Familie," etc.

The final result of the evolution of the abstract word toward the concrete is its transformation into an adjective. In sentences like: "This man is *all goodness*," "this woman is *virtue itself*," the words *goodness*, *virtue* serve as epithets. It is because of this that adjectives often represent old substantives. In Latin, *uber* (fecund) is only the substantive *uber* (breast), converted into an adjective. This use is derived from

expressions like *ager uber* (a field that is a breast)—that is to say, a field which produces abundantly, and nourishes. The innovation consists in giving to the substantive the multiple inflections of an adjective ; instead of *agri ubera*, where the second substantive is in apposition to the first, we say *agri uberes*. The ambiguity of such an agreement as *arua ubera* facilitates the innovation. Substantives are also to be found in the comparative and superlative, although the degrees of comparison belong to adjectives only : in Middle-German, *scheder* is the comparative of *schade* (pity). In fact, when anyone says *es ist Schade*, French, *c'est dommage* (it is a pity), the substantive serving as an adjective should be capable of yielding the degrees of comparison.

The fact that a substantive can easily become an adjective shows that there is no essential difference between them. Doubtless, between " Peter is *good* " and " *Goodness* is a virtue ", there is this difference, that *good* expresses the quality individualized, rendered concrete in a certain being, i.e. Peter—whereas *goodness* is the expression of the quality itself abstractly conceived. But if I say " Peter's *goodness* is great ", by the very fact of giving a complement to the word *goodness*, I point out the individual who possesses the quality of goodness ; and my sentence has exactly the same sense as though I said " Peter is greatly *good* ". The difference lies simply in the formation of the verbal image.

The contrast between substantive and adjective is perhaps clearer if we place side by side sentences in which the same word has both uses.[1] Compare, for example, *les blessés allemands* (the German wounded) with *les Allemands blessés* (the wounded Germans) ; *des savants sourds* (deaf scholars) and *des sourds savants* (learned deaf), etc. There is no doubt that the first words of each series are substantives, and the second adjectives. The difference lies in the point of view. If I am considering the wounded as a whole, I distinguish among them groups of diverse nationalities, and I say German, French, or Russian *wounded*. If I am considering German soldiers in general, I distinguish between the dead, the wounded, the missing, the whole, etc., and I say the wounded, dead, or sound *Germans*. We often express this difference by saying that the " content "

[1] Jespersen, **CCXXIX**, p. 19.

of the adjective is greater than that of the substantive. This is true on condition that we add " for the person speaking ". The question is not really whether there are more learned than deaf, or deaf than learned, more wounded than Germans, or more Germans than wounded, but whether the person speaking is thinking of the category of the wise or that of the deaf, and the wounded as a whole (in a hospital, for example) or the Germans as a whole (of a body of troops).

There may be this same difference of content between two substantives. Thus, by apposition, we say: " *l'enfant* roi " or " le *roi* enfant " ; the second word in each expression acts as an adjective in relation to the first. In the first case, the speaker has in mind primarily the category of children and in the second that of kings—two entirely different points of view.

The adjective, in its turn, may become a substantive. This happens whenever the general quality expressed by the adjective is referred to a particular individual, that is to say, whenever it becomes definite instead of indefinite, which it is by nature. This distinction is so important that it is specially indicated in the morphology of most languages. In Sanskrit and ancient Greek, the accent sometimes suffices to indicate it ; λευκός " white " and λεῦκος " white fish ". Generally the definite quality is shown by a special suffix added to the adjective. In Greek and Latin it is a nasal suffix. For example, στραβός means " squint-eyed " but Στράβων " he who squints, the squinter " ; *catus* " sly, malicious ", but *Cato* (gen. *Catonis*) " the malicious one, the sharp fellow ", *rufus* " red ", but *Rufus* (gen. *Rufonis*) " the red one " ; and from this has arisen the use of these definite adjectives as proper nouns. In French the definite character is designated by the article. Compare " vous êtes *impertinent* " (you are impertinent) with " vous êtes *un impertinent* " (you are an impertinent fellow), or with *l'impertinent* ! (the saucy one). When the adjective is preceded by the article it implies not only that the person in question has the quality of being impertinent, but that this quality, so to speak, is concentrated in him, classifying and distinguishing him. That is why proper nouns derived from adjectives have the definite form. It is the same with vocatives ; for in addressing ourselves to any person we are not concerned with indicating that he possesses this or that particular

quality, but simply wish to designate him personally by some quality he possesses. In Germanic, as in Slavonic, the adjective admits of two distinct inflections according to whether it is indefinite or definite; in Gothic, for example, vocative, the adjective has the definite form in the vocative: *atta weiha* (O! holy father), *bropryus meinai liubans* (O! my dear brothers). In French, as the preceding examples have shown, the definite is indicated by the article: *un monsieur impertinent*, but *monsieur l'impertinent*; in French also they say *hé, le gros! le poilu! l'enflé!* This is the origin of the presence of the article in proper names: *Lebeau, Legrand, Leroux.*

Owing to the fact that the article expresses definition in French, it can give a substantive value to every linguistic expression; thus: *un pourquoi, des si et des mais.* Even a whole sentence may become a substantive. If the verbal sentence has a general significance, having been conceived in the abstract, it becomes a substantive symbol. A child is present at the departure of a train; he hears the locomotive whistle and sees the train move; he sums up his impression by saying "puff-puff goes", combining the two impressions of the noise and the starting. We have here nothing but a verbal sentence. But the child generalizes and labels the train with the name "puff-puff goes". For him the train is something which goes, while making the sound puff-puff. He will say: the puff-puff go, has gone, the puff-puff-go was full, long, laden with merchandise, etc. He has made a substantive from a verbal sentence by prefacing it with an article. This is the origin of many French words: *un m'as-tu vu, le qu'en dira-t-on, au décrochez-moi ca, une Marie couche-toi là.*[1] Inflectional languages form words of this kind by means of a formative. The rhetorical Ulpian of Tyre was surnamed Κειτούκειτος owing to the formula κεῖται ἢ οὐ κεῖται; "Is that so or not?" a phrase always on his lips. A number of composite Sanskrit nouns are thus, in reality, small sentences in abridged form: *ahampūrvas* (literally, "I first") is in the *Rig-veda* (1, 183, 3) the epithet for a chariot (which would win the race). There has sometimes been doubt as to whether the first member of Greek words of the type ἑλκεσίπεπλος (trail-gown), ταυυσίπτερος (spread-wing), δακέθυμος (bite-heart),

[1] For analogous facts in Hungarian, cf. Szimonyei, **CCXI**, p. 244.

is a noun or a verb.[1] There is no possible excuse for doubt; unquestionably they are verbs, like the French *prie-Dieu, traîne-misère, meurt-de-faim, vide-gousset, brise-miche,* etc. In a child's talk a perfume is called a *sent-bon* (smell-good). But each of these compound words, judged as a whole, is clearly substantive.

Thus appears a classification of nouns which includes all substantives and adjectives (naturally comprising, likewise, adverbs of manner); on the one hand, we have action nouns and agent nouns, as defined by the verbal sentence, with instrumental and objective nouns as derivatives; on the other, parallel with these, we have abstract and concrete qualitative nouns (substantives and adjectives) as defined by the substantive sentence, which, in their turn, furnish a goodly number of objective nouns. We have also pointed out that there is a way of classifying verbs according to mood (imperative, indicative, subjunctive [future and conditional]). Nouns and verbs represent the *living elements* of language in contradistinction to the *grammatical devices* (prepositions, conjunctions, articles, or pronouns). We observe that it is not impossible to construct a general classification of the words of a language upon a plan justified by logic and in no way contrary to the grammatical rules of the principal languages. The types of words that we have just differentiated are in fact generally characterized in each language by special morphemes.

This logical classification, however, is not the only one by means of which the words of a language can be classified. We can also imagine a psychological classification, based not only upon the nature of the representations inherent in the words, but upon the importance the mind attaches to these representations.[2] The psychological aspect is often co-extensive with the logical, when each may give precision to the other by means of their superimposition. The first, however, is sometimes more varied than the second, and embraces categories that are outside the sphere of logic. It has, furthermore, the advantage of being open to experimental confirmation. By a study of mnemic phenomena psychologists can actually measure the

[1] Osthoff, **CLXXXVII,** and F. Meunier, *Les composés syntactiques*, Paris, 1872.

[2] See van Ginneken, **LXXVII,** p. 62 ff., with quotations from Binet.

respective " adhesive " powers which words possess in the mind. Conclusions drawn from this study have led to a classification based upon the rapidity with which words are forgotten.

There is a very simple way of calculating the relative importance of the elements of a given sentence. Read this sentence to different persons and ask them which words they notice first and most. The answers will generally be identical. Real words stand out more prominently than morphemes, nouns than verbs, concrete than abstract nouns. The most striking words are those which immediately evoke a visual image, particularly the names of persons and places (providing that the person questioned knows them). Say to someone : " I am going to Melun " ; or " I could not go to Melun ", or " I shall perhaps go to Melun ". In all three cases the image which presents itself first and most naturally to the mind is that of a little town nestling among grass and trees, with its grey roofs terracing the hill-side. He will see the arches of the stone bridge spanning the Seine, and the row of tall poplars on the banks, or else the slender spire dominating the town, or some house in the old quarter familiar to him. The vision is immediate and spontaneous. The idea of the journey will only present itself to his mind together with the reflection as to whether the journey will or will not take place. Like all morphemes, negation has no poetic value.

This fact is not without its consequences for the æsthetic use of language. Failing to be on their guard in this matter some writers have produced rhythmically veritable contradictions of the words. In order to convey to the reader the opposite of a given impression it is not enough to attach a negation to the words describing it—for this is not the way to suppress the impression one wishes to avoid ; on the contrary, the image is evoked by the effort to banish it. A contemporary poet who wished to describe a garden under an oppressive midday summer sun wrote the following :

> Et d'entre les rameaux que ne meut nul essor
> d'ailes et que pas une brise ne balance,
> dardent de grands rayons comme des glaives d'or.
>
> (Through the branches, never stirred
> By flutt'ring wing nor breath of wind
> Sunbeams glance, like golden swords.)

These French lines are well calculated to give the impression

of the beating of a bird's wings or the swaying of the breeze, and the use of the negative in no way blots out this impression from the reader's mind.

In a single verse Hérédia expressed the idea much more correctly :

> Tout dort sous les grands bois accablés de soleil.
> In the woods oppressed with heat everything sleeps.

The grammatical morpheme is not confused here with what might be called the morpheme of expression.

We can easily conceive the establishment of a sort of hierarchy of words ranged according to their poetic value and whose highest and lowest terms would be the proper noun which invoked persons or places, and the morpheme, and simple grammatical device, such as a preposition, article or even a negation. Between these two lies all that separates the abstract from the concrete, and within this space is contained the entire vocabulary. But it is just in the transition from the concrete to the abstract that words escape the memory. Th. Ribot thus determined the order of regression ; [1] first, proper nouns, common nouns, adjectives, and finally verbs. We might take exception to this order, which makes the mistake of accepting the usual grammatical classification as its basis. Certain common nouns, and even certain adjectives, are as concrete as proper nouns. The abstract or concrete value of nouns may vary according to individuals, and it also varies with different languages. In the classical languages, and even in French, the verb always appears laden with morphemes which confine it more or less to the category of abstract words. Nevertheless, there are verbs which call forth images just as well as nouns, even though there are others which have no plastic value of any kind.

In general, it is a fact that proper nouns are forgotten first ; we forget concrete substantives (which are often only proper nouns) more quickly than abstract substantives or adjectives. In verbs the infinitive survives the loss of the indicative. The most stable elements in the mind are the grammatical devices. In short, the abstract has a greater holding power than the concrete. This is doubtless to be explained by the fact that an abstraction penetrates the mind by an intellectual effort, and

[1] *Les maladies de la mémoire*, Paris, 2nd ed. (1883), p. 165. Cf. van Ginneken, **LXXVII,** p. 71 ff.

requires some definite mental intention, whereas the concrete is simply a reflection of objects in the mirror of consciousness. Thus, although in a given sentence the concrete words evoke mental images more rapidly than abstract words, they are nevertheless more quickly forgotten. The precision of the image perhaps causes us to attach less importance to the name it bears.

A rearrangement of the parts of speech from the standpoint of this principle would differ from the usual classification. Verbs, adjectives, and substantives would be grouped according to a quite new plan, and prepositions and adverbs likewise. A word like *plein* must be regarded as a preposition in *plein la rue*, *plein les cheveux*, although this preposition is less abstract than *à* in " [aller] *à la rue* ", [prendre] *aux cheveux*. The idea of such a classification does not seem to have advanced very far up to the present. Here it is enough to indicate its possibilities and its interest. To insist upon it further would mean to encroach upon the domain of vocabulary, which is to form the subject of a special section, as also upon the domain of affective language, to which the next chapter is devoted.

CHAPTER IV

Affective Language

HITHERTO we have only accounted for the way in which ideas are logically formulated, that is to say, we have studied language only as an intellectual tool. But we do not speak merely to formulate ideas. We speak also with the object of reacting upon our fellow beings and of giving expression to our own feelings. That is to say if we base our distinctions upon the traditional threefold classification of intelligence, will and feeling, we must consider active and affective language apart from logical language.

Active language has as yet scarcely been studied at all. Nevertheless it has its importance, and this becomes quite evident when one attempts to picture to oneself the genesis of human language (see p. 14). Besides, in the course of history, it manifests its own laws. From a grammatical point of view, its domain is the imperative in the verb and the vocative in the noun, each of which, in their respective categories, have special forms and uses. When, in the preceding pages, we grouped under a single concept a verb like " Be quiet ! " a noun like " silence ! " and an interjection like " ssh ! " this confusion was possible only because we were dealing with active language, where the distinctions between verb and noun have become effaced. Although active language frequently draws its sustenance from the logical language from which it has borrowed certain ready-made grammatical terms, it should yet be given a place to itself ; for it has a rôle of its own, and uses its own special devices. However, it still remains to be properly studied.

The discussion of affective language will occupy us longer. During the last twenty years it has been the subject of penetrating researches, which have defined its limits and stated its processes.[1]

[1] Consult particularly the works of MM. Bally and Sechehaye, by whom most of this chapter has been inspired. Ch. Bally's " L'Etude systématique des moyens d'expression " (*Neuere Sprachen*, vol. xix) : " Stylistique et linguistique générale " in **XXV**, vol. cxxviii (1912), pp. 87–126 ; **XLV** ; **XLVI** ; Sechehaye, **CXXII**. Cf. also Vossler, **CCXVIII**. A practical application of stylistic principles will be found in the works of M. Lanson, *Conseils sur l'art d'écrire et l'art de la prose.*

G. von der Gabelentz once said : " Language is not used by man merely to express something, but also to express himself." Hence we must take into account not only the way in which ideas are formulated, but also the relations existing between these ideas and the feelings of the speaker. In other words, all language must distinguish between the representations which can be analysed and the personal element which the speaker adds from his own resources, that is to say between the logical and the affective element.[1]

These two elements are constantly intermingled in language. Apart from technical, and especially scientific, language, which by definition is outside ordinary life, the expression of an idea is never free from some emotional tinge. In the affective gamut there is no note corresponding to an absence of emotion, but only to feelings which differ from each other. When several competing expressions attempt to express the same idea it is very rare that one of them should be purely intellectual, and express a reason or present a fact in all its naked simplicity. I see an accident happening, and I cry out in pity for the victim : " Ah ! poor man ! " I come upon a friend whom I did not expect to meet, and exclaim " You here ! " These sentences have a distinctly affective value. Expressed in the discursive language of logic they would amount to : " I pity this poor man," or " I am astonished at seeing you here ". Imagine that these two types of sentence are really employed, would they not also have had an affective value, different, to be sure, from that of the exclamation previously given, but none the less striking ? In cases like these we either experience a desire to draw a moral lesson from the accident, or to add a reproach to the astonishment felt on meeting a friend ; or to restrain an over-violent gust of feeling, struggling to find some vent. In such a case, to express no emotion is really to evidence emotion.

There is hardly a sentence so commonplace that it contains no affective elements. If I say " Peter strikes Paul " I seem to have expressed a simple relation between two persons united by the action of striking. At least the analytical process called logic will disclose nothing else. In reality, however, a sentence of this kind is never the logical expression of a relationship. A certain affective tinge is always added to it. The fact of

[1] Sechehaye, **XCVIII**, p. 184 ff.

Peter striking Paul is never a matter of indifference to me. If I were indifferent I should not make the statement. The sentence I utter has an entirely different value for me from what it would have if I were to read it in an historical work, where it might concern a King Peter and a King Paul in whom I had no reason for taking a personal interest. An historical account is always objective. It is this which makes the schoolboy, repeating his history lesson, enumerate without turning a hair the atrocities men have committed in their mutual struggles. These do not touch him because he sees them projected into a distant past from which the passage of many years separates him. Indeed, he is rather amused by them. On the other hand, we cannot read without shuddering the account of a commonplace crime committed at our own door. In the example chosen above, according as Peter and Paul are my children or strange children, according to their age and strength, my preferences and sympathies, or other circumstances easy to imagine, I utter the sentence in question with various feelings—the desire to reprimand or threaten, indignation or anger, satisfaction or encouragement, approbation or astonishment.

These feelings are all naturally expressed by the intonation and inflection of the voice, the rapidity of delivery, the stress which is laid upon this word or that, or even by the gesture accompanying the word.[1] The same sentence can be uttered in a thousand different ways corresponding to the minutest shades of feeling. A dramatic artist declaiming his part must find for each sentence the adequate expression and the right tone, and this is the surest sign of his talent. He takes the printed word, dead and expressionless, animates it with his voice, and breathes life into it. The complete content of a sentence, therefore, is not exhausted when the words composing it are known and its grammatical elements analysed. It still has an affective value which must be taken into account.

This is properly the task of the psychologist studying the nature of feelings, and in equal measure that of the artist seeking to reproduce them upon the stage ; but hardly the linguist's affair. These feelings concern him only in so far as they are expressed by means of language. Generally, however, they remain outside the domain of language, somewhat

[1] Cf. Bourdon, **LII.**

like a thin haze floating around the expression of the thought without its grammatical form. It would be quite true to say that such a sentence as *Peter strikes Paul* is never uttered without some intonation which provides it with a precise shade of feeling. But the human body invariably occupies a certain definite position in reality, and cannot be conceived otherwise. The so-called position of rest is a position like the others. It is the sculptor's duty to know what forms the muscles assume in all the attitudes of the body, and accordingly he cannot make too exhaustive a study of the human anatomy. But the anatomist who dissects the parts of the body may dispense with the consideration of bodily movement. Whatever the movements may be, it is always the same body which is moving. Similarly, whatever may be the variations of intonation and gesture accompanying the expression of a sentence, the linguist is not concerned with them so long as the grammatical structure of the sentence remains unchanged.

There are cases, however, in which the affective expression instead of being superimposed upon the grammatical expression, mingles with it to the extent of modifying it.

An affectivity in language is generally expressed in two ways : by the choice of words, and by the position they occupy in the sentence. That is to say, vocabulary and syntax are the two principal resources of affective language. Vocabulary will be studied separately, and we shall then see how supreme is the rôle affectivity plays in producing changes in meaning. Here we need only mention those cases where the affective part of the word resides in the suffix, that is, in a morphological element. Such cases are fairly frequent. When a word with a very strong affective content contains a certain suffix, it may so happen that the suffix itself will be so permeated with this expressive content that it will concentrate within itself all the expressive power of the word, and become the expressive element. For example, the suffix *-aille* does not in itself call forth any special idea ; in *bataille* for instance, it has no value. But because it forms part of such pejorative words as *canaille* (rabble), *marmaille* (brats), etc., it has itself taken on a pejorative meaning, and everyone feels the shade of contempt suggested by *prêtraille* (parsons), or *radicaille*. In quite a number of words, the suffixes *-ard* and *-asse* have an analogous significance. Those which we call " diminutives " because

their purpose is to suggest in miniature the idea of the word with which they are associated, usually have an additional suggestion of prettiness, preciousness, or even tenderness, sympathy, and pity. *Maisonette* and *jardinet* imply not only a house or a garden of modest size, but the suffixes *-et, -ette*, are here really morphemes of feeling. Morphology here contributes to the expressive content as much as vocabulary could do in the use of an epithet—*ma petite maison, mon pauvre petit jardin.*

The order of words has likewise a considerable bearing on grammar.[1] Languages differ enormously in the degree of freedom they allow in word-order. Two kinds of languages are often distinguished, those with a free and those with a fixed word-order, but such a distinction is not justified by facts. In reality there is no single language in which the word-order is entirely free, and none in which it is immutably fixed. Ancient Greek, like Indo-European, passes for a tongue in which word-order is free. And yet, to use an expression of Plato, we cannot shuffle words according to our fancy, as the numbered counters of Loto are shuffled in a bag. Conversely, however definitely the word-order is fixed in French or German, Chinese or Turkish, these languages admit of a certain flexibility, and do not become utterly incomprehensible if the word-order is modified. Naturally, it all depends upon the kind of modifications made.

The truth is that there are languages in which the word-order plays a grammatical rôle, and in which freedom of word-order is naturally held in check by the morphological value of the process (see p. 79). There are others, on the contrary, in which grammar imposes no compulsory order. The logical relations between the words will not be disturbed in the least if they are displaced. For example, in Latin, we can say *Petrus cædit Paulum* or *Petrus Paulum cædit*, or *Paulum cædit Petrus*, without introducing any doubt as to the subject, verb, or complement. Logical analysis could discover no difference. And yet the three orders are not identical in value, and a Roman native would not have been misled. The study of the Latin sentence in the hands of the best writers, shows in fact, that it is governed by strict laws, although they are often difficult to

[1] Cf. despite its date H. Weil, **CXXVIII.**

disentangle in their disconcerting variety. In each case it is rather a matter of feeling than reasoned rule. There is an ordinary, commonplace order which occurs spontaneously to the mind.[1] This order can be set aside, but the fact of its being so set aside reveals a purpose, which is to give prominence to a particular word in order to attract to it the attention of the listener. This is a trick of style which can be made into a fine art: indeed, the study of syntax often encroaches upon that of style.

This sort of study is one of great nicety, for it demands a trained sense of language and considerable subtlety of literary taste, joined with a rare knowledge of the philological implications of the language considered. Accordingly, it has hitherto been cultivated only to a limited extent. Even in so well laboured a field as that of classical philology, methodical research upon the respective positions of words in a sentence is a recent development. And even the method suited to such research is only now being marked out.[2] To-day we realize that in order to study the syntax of a language from the point of view of the grammarian, we must never try to obtain an average from the great bulk of the sentences, to find out the order in which the words are arranged. First the various types of sentences must be distinguished, and then in each of these types particular groups must be distinguished whose word-order is essential. Current use does not consist merely in placing one word after another, in the sentences, but in combining certain groups of words in given positions. In a substantive sentence, for example, the possible variation is reduced to two terms; the subject and the predicate. The verb, if expressed at all (see p. 123), belongs to the predicate, and the position of the verb in relation to the predicate constitutes a secondary potentiality of variation independent of the first. The normal order in Latin is *homo auarus est* or *auarus est homo*, according to whether the idea of the man or that of the avarice has to be more strongly emphasized. The difference between the shades of meaning in either case is often imperceptible; it is a pure and simple

[1] L. Havet, *Mélanges Nicole*, p. 225–32.

[2] Cf. particularly Marouzeau, **XCI** and **XI** (1906), p. 309 ff., Kieckers, "Die Stellung des Verbs im Griechischen und in den verwandten Sprachen," Strasbourg (1911), and **XXX**, p. 145, and **XXXII**, p. 7.

statement of the avarice of man. These two word-orders represent a commonplace type of substantive sentence. They cannot be set aside except for good reasons. Thus, for example, the inversion *homo est auarus* changes the value of the copula; the sentence becomes a substantive verbal one of the French type, as in *il se trouve bien* or *il paraît grand*. The copula, without becoming absolutely independent, is not quite so featureless as in the substantive sentence. It can be translated in French by "He is it, the miser", or "it happens to him to be avaricious", "he finds himself to be avaricious," etc. The disjunctive arrangement *auarus homo est* emphasizes the avarice: "It is avaricious that man is," or "avarice is the weakness of the man", etc. To sum up, in the substantive sentence with the verb *to be*, the word-order conveys the respective importance of the subject or predicate, and the two values of the verb *to be*—a simple copula, or else a verb of existence.

In a verbal sentence the essential groups are the subject, verb, and the objects (direct or indirect) and each of these groups itself comprises one or several words, according as the subject, for example, is accompanied by epithets or by various relations, or the verb by a variable number of adverbs. First of all we must determine whether the verb precedes the subject or the subject the verb, and then how to introduce the objects in the order thus established. We then recognize that apart from the cases in which the word-order has a morphological value (see p. 79), the respective positions of the verb and subject are governed in each language by the predominance of certain types of sentence which become finally imposed on current use. Word-order, even in languages like Greek and Latin, appears to be far more definitely fixed than we should have thought at first sight. For example, we know that in old Greek there are certain expressions with an invariable word-order. It was usual to say ἔδοξε τῇ βουλῇ and not τῇ βουλῇ ἔδοξεν. In the signature of works of art or in dedications, it was customary to place the verb in the middle of the sentence, framed by the subject and its modifiers: Πυρρὸς ἐποίησεν Ἀθηναῖος. In an old Ionian dedication of the sixth century found at Naxos, we read Νικανδρη μ' ανεθεκεν εκηβολοι ισχεαιρηι. In such a case the verb is only rarely placed at the end. Doubtless, if we followed up these researches further we should come to recognize the usual order in a great many types of old Greek sentences.

However, this would not prove that there were not occasional orders left to the discretion of the writer.

In languages where the word-order is fixed, but has no morphological value, the considerations that led to its being fixed are generally revealed upon a careful examination of the conditions of the language itself. Normally, it takes a very long time for the order to become definitely fixed. In Celtic such order had been fixed as early as the oldest Irish texts : [1] the verb is placed at the beginning of the sentence, preceded only by verbal prefixes which are very freely used in Celtic; then comes the subject, and lastly the objects. This placing of the verb before the subject is apparently due first, to the fact that Celtic always inserts the pronominal objects (which are also greatly used) between the prefix and the verb, and is secondly, due to the Indo-European custom of always giving the enclitic pronoun the second place in the sentence (after the first word emphasized). This stereotyped, so to speak, the early Celtic sentence, which included a verb and its prefix, and the numerous pronominal objects, which were the more numerous. Thus, the sentences were all doomed to begin in the same way ; verbal prefix, pronominal object, verb ; and the subject could only come last. It was the persistence of an old tradition that had created this habitual word-order. It should be added, however, that this order had certain practical limitations, and that as time went on, it was less rigidly followed.

In Germanic the situation is somewhat different. German uses two orders, equally rigorous, according to the nature of the sentence. In the principal clause the verb always occupies the second place, and the subject and the object (or attribute) may be placed before or after at the will of the speaker. In subordinate clauses, the verb is always placed at the end, after the subject and objects. We may, therefore, say in a principal clause : " der Wolf lebt *im Walde*," or " *im Walde* lebt *der Wolf*" ; " *der König* ist *blind*," or " *blind* ist *der König*" ; but in subordinate clauses : [*man weiss das*] " *der Wolf im Walde* lebt ", " *der König blind* ist." The determination of these two orders was a gradual historical process. In Old Germanic the contrast between the usual and the occasional orders varied in complexity with the different types of sentence. Simplifications had apparently taken place under conditions which we

[1] Vendryes, **VI**, vol. xvii, p. 337.

still know very little about.[1] In giving to the verb a fixed position, the German still reserved to himself the right to dispose as he pleased of the other words ; and each order has a significance of its own. Along with the commonplace order, which naturally occurs to everyone, there are the possibilities of many others among which the speaker may choose according to his fancy.

The main difference between affective and logical language lies in the construction of the sentence. This difference stands out clearly when we compare the written with the spoken tongue. In French the two are so far removed from each other that a Frenchman never speaks as he writes and rarely writes as he speaks. There is in each case, besides a difference in vocabulary, a difference in the arrangement of the words. The logical order in which the words of the written sentence are introduced and set is always more or less dislocated in the spoken sentence. Sentences like the following belong to the written language : *Il faut venir vite* ; *quant à moi, je n'ai pas le temps de penser à cette affaire* ; *cette mère déteste son enfant.* But in the spoken tongue, nine times out of ten, the form would be entirely different : *Venez, vite* ! *Du temps, voyons* ; *est-ce que j'en ai, moi, pour penser à cette affaire-là* ; *son enfant, mais elle le déteste, cette mère.*[2]

What shall we say of the balanced sentence in written language, with its subordinate clauses, its conjunctions, relative pronouns, and all the paraphernalia of its periods ? We should hardly say in the spoken language : *Quand nous aurons traversé le bois et que nous aurons atteint la maison de garde que vous connaissez, avec son mur tapissé de lierre, nous tournerons à gauche jusqu'à ce que nous ayons trouvé un endroit convenable pour y déjeuner sur l'herbe.* (When we have traversed the wood and reached the keeper's house of which you know, with its ivy-hung walls, we shall debouch to the left till we find a suitable spot in which to have our repast alfresco.) But rather : *Nous traverserons le bois, et puis nous irons jusqu'a la maison, vous savez la maison du garde, vous la connaissez bien, celle qui a un mur tout couvert de lierre, et puis nous tournerons à gauche, nous chercherons un bon endroit, et puis alors nous déjeunerons*

[1] Delbrück, **CLIV.**
[2] All these examples are taken from Bally.

sur l'herbe. (We go through the wood, and then on to the house, you know the one—the keeper's with ivy on the wall—and then off to the left, where we ought to find a nice place to picnic.) The elements that the written tongue endeavours to combine into a coherent whole seem to be divided up and disjointed in the spoken tongue : even the order is entirely different. It is no longer the logical order of present-day grammar. It has its logic, but this logic is primarily affective, and the ideas are arranged in accordance with the subjective importance the speaker gives to them or wishes to suggest to his listener, rather than with the objective rules of an orthodox process of reasoning.

In the spoken tongue, all idea of meaning in the purely grammatical sense, disappears. If I say, *L'homme que vous voyez là-bas assis sur la grève est celui que j'ai rencontré hier à la gare* (The man that you see sitting down there on the beach is he whom I met yesterday at the station), I am making use of the processes of the written tongue and form but one sentence. But in speaking, I should have said : *Vous voyez bien cet homme—là-bas—il est assis sur la grève—eh bien ! je l'ai rencontré hier, il était à la gare.* (You see that man, down there—he is sitting on the beach—well ! I met him yesterday, he was at the station.) How many sentences have we here ? It is very difficult to say. Imagine that I pause where the dashes are printed : the words *là-bas* in themselves would form one sentence, exactly as if in answer to a question—" Where is this man ?—*Down there.*" And even the sentence *il est assis sur la grève* easily becomes two if I pause between the two component parts : " il est assis," [il est] " sur la grève " (or " [c'est] sur la grève [qu'] il est assis "). The boundaries of the grammatical sentence are here so elusive that we had better give up all attempts to determine them. In a certain sense, there is but one sentence. The verbal image is one though it follows a kind of kinematical development. But whereas in the written tongue it is presented as a whole, when spoken it is cut up into short sections whose number and intensity correspond to the speaker's impressions, or to the necessity he feels for vividly communicating them to others.

Where written language makes use of subordination, spoken language, as we can see from the preceding examples, makes use of juxtaposition. In speaking, we do not use grammatical connexions which encompass the thought and give to a

sentence the succinct aspect of a syllogism. Spoken language is flexible and nimble ; it indicates the bond between the different clauses in the briefest and simplest way. In French, conjunctions like *et* or *mais* are usually sufficient for this purpose. In order to mark subordination languages have a tendency to use a particular expression applicable indifferently to all cases. Thus, in the course of its history, we see Indo-European creating for itself a connecting apparatus and in this way a system of relationship was evolved. In the first stages intonation must have played a part ; the relationship between two sentences was indicated by the use of a different tone for the verbs or by certain particles which were repeated in each of them. Certain languages have retained this inter-play of forms which differed according to whether the clause was principal or subordinate. In general, however, they were content to give to a particle (relative pronoun or conjunction) the function of introducing the subordinate clause, and so to speak, of labelling it. We need but think of the remarkable fortunes of the conjunction *que* in French. The written tongue, seeking precision, and with leisure for deliberate preparation, voluntarily complicates the expression of the connexion between sentences according to the particular shade of thought ; the spoken tongue, however, tends to adopt a symbol, leaving to the person addressed the task of divining the nature of the connexion in question. The same conjunction in the same tongue may, therefore, sometimes signify " because ", " although ", " in order that ", and " when ". In spoken French, the common people reject the forms *dont, auquel, pour lequel,* which seem to them clumsy and inconvenient ; they are content to mark the connexion by a *que,* so long as the nature of the connexion is indicated afterwards in the relative clauses he has in view. Instead of " l'homme *dont* je connais la fille ", " le patron *pour lequel* je travaille ", " le pauvre *à qui* je fais l'aumône " they would say : " l'homme *que* je connais *sa* fille," " le patron *que* je travaille *pour lui*," and " le pauvre *que* je *lui* fais l'aumône ". These turns of expression found in modern French were customary in the Celtic dialects of the Middle Ages.[1] They show how independent the spoken and written tongues are of each other.

[1] They are also to be met with in German in regions bordering on Slav areas ; see Behaghel, **CXLIV,** p. 30.

What particularly characterizes spoken language is that it contents itself with emphasizing the main lines of thought. These alone emerge and dominate the sentence, while the logical relations of words, and component parts of a sentence, are either imperfectly indicated, with the help, if necessary, of intonation and gesture, or are not indicated at all and have to be supplied by intuition. This spoken language thus approximates to spontaneous language, so called because it gushes spontaneously from the mind under the pressure of strong emotion. The striking words are then prominently placed, as the speaker has neither the leisure nor the time to mould his thought according to the strict rules of reflective and organized language. Spontaneous language is therefore in definite contrast to grammatical language.

The question arises as to whether one of these forms is necessarily older than the other, and whether spontaneous language is to be confounded with affective language. When a person cries out in astonishment on meeting someone unexpectedly " You here ! " it might, strictly speaking, be maintained that the source of this exclamation is the grammatical expression : " You are here ! " or " I'm astonished that you should be here ". Grammarians, at least, do not hesitate to interpret it thus, invoking a grammatical figure—an ellipsis, or " understood " phrase—to explain it.

But the language of children will best help us here. The child who says " papa here " meaning that his father has come or is present, can only express a statement of fact. Hence, when later on, he has acquired the ability to reflect, and the faculty of analysing his conceptions and expressing them completely in speech, he will say " papa is here ", or " papa has come here ", instead of " papa here ". Must we then assume that this is a transition from spontaneous non-grammatical language to a language grammatically organized, without an affective starting-point ? This would be exceedingly rash. For the child did not begin by giving to his rudimentary sentence " papa here " a certain objective character. The first cries he uttered were expressive of desire, intention, or need, and the first time he said " papa here " he was expressing joy at seeing his father again, or a desire to see him and make him come. It is consequently in the course of the child's development that the objective expression " papa here " comes into

being by the elimination of the subjunctive element ; later on, this idea in its turn became capable of complete grammatical expression by the addition of a verb ; but the child certainly started with an affective formula.

Certain linguists who are at the same time psychologists are inclined to believe that with the child, affective language always precedes intellectual language.[1] It is only by a gradual process that the intelligence transforms sensations and emotions into ideas, and that an idea separates itself from the affective elements without, however, completely eliminating them. At the very heart of purely affective spontaneous language there is thus a solid nucleus which gradually grows greater by identification with its surrounding parts : this is the conventional or grammatical language, which continues to be implanted in the other, nourished ceaselessly by it, without ever being able to exhaust it. Such a theory is above all genetic and dynamic. It claims to explain the origin of grammar, that is to say of organized language, by a stabilization of the amorphous and inconsistent elements of which the pre-grammatical substance of language is constituted. This pre-grammatical substratum then persists to some extent throughout the life of every one of us, all the phenomena of affective language being referable to it. But, by inverse action, it could also feed itself from grammatical sources—as, for example, when a logically formed sentence becomes, like a pure reflex, the cry uttered unconsciously, under the influence of acute grief or sudden fright.

Logically organized grammatical language is never, as a fact, independent of affective language. Both ceaselessly react upon each other. We have just seen that in all languages the word-order tends to become stabilized either because grammar imposes a certain invariable order, or because it has become customary to adopt the same order for all sentences of the same type. This does not prevent affectivity from having a variety of means of expression structurally in a sentence. Sometimes a word or a part of the sentence is flung out in advance of the sentence, without being taken up again later in the form of a

[1] Cf. particularly Sechehaye, **CXXII**, p. 67 ff. ; cf. Lévy-Bruhl, **LXXXVIII**, p. 27 and ff.

morphological element such as a particle or pronoun ; sometimes it is relegated to the end and isolated from the context with no anticipatory announcement in the body of the sentence ; and sometimes, even, the continuity of the sentence is abruptly broken, and the second half is evolved on a new plan without reference to the first. These various procedures, common enough in spoken language, have often been borrowed by the written when it becomes necessary to produce a certain effect.

When La Bruyere said : *Un homme de talent et de réputation, s'il est chagrin et austère, il effarouche les jeunes gens,* or better still : *Un noble, s'il vit chez lui dans sa province, il vit libre, mais sans appui,* his sentence can be described as artistic writing, but it is obviously reproducing a frequent conversational device.[1] Similarly, *Ce pauvre monsieur, il était si bon,* or again *Un enfant sage, on lui donne tout ce qu'il veut.* Many languages use the same device. We meet it in German : *der Kirchhof, er liegt wie am Tage, die Glocke, sie donnert ein mächtiges Eins.* English, likewise, furnishes many examples, and it has also been observed in Old Persian.[2] It is the usual practice in Malayo-Polynesian. Finally, it occurs also in Chinese. Instead of *Wo me kien kouo t'a ti fang tseu* (I have not seen his house—literally—" me not see have his house ") one can say, *t'a ti fang tseu wo me yeou kien kouo* (his house, I have not seen it).

There was evidently at the outset a slight shade of difference between the two turns of expression, as even the French indicates. One is commonplace and inexpressive, the other, to a greater or less degree, expresses a particular shade of feeling. It may, however, so happen that the second is imposed upon common use and replaces the first. From being affective it becomes grammatical. For example, one can say in French : *Cet homme-là, sa maison est belle,* instead of *la maison de cet homme-là est belle.* In a language like Irish it is usual to say, using the prolepsis, " his house of this man " instead of " the house of this man ". In German there is a choice between *das Haus meines Vaters ist schön* or *meines Vaters Haus ist schön* ; but dialectically another expression has developed : *meinem Vater sein Haus ist schön,* which combines the use of the prolepsis (by using the possessive) and of the dative, in place

[1] Brunot, **LVII,** vol. iii, p. 485.
[2] Meillet, *Grammaire du vieux-perse,* p. 11.

of the genitive, to mark ownership. In certain modern German dialects this turn of speech is the only one used. In Coburg, for example,[1] *meines Vaters Haus* is unknown, the current and only form being : *maen fader sae haos* (where *maen* is the dative-accusative form ; the nominative being *mae*). This popular and dialectal form is not unknown in literary language ; Goethe furnishes examples of it. Here a procedure belonging to affective language has penetrated into the grammar.

Even grammatical categories are sometimes expressed by means of a procedure belonging to affective language. Certain among them, it is true, lend themselves to it particularly. In studying the category of time we saw how important duration may be ; though what we call duration is the aspect a certain action assumes for us, the particular angle from which we see it. It is therefore primarily a question of viewpoint, and as the choice of the viewpoint is a subjective matter, it is bound to be partly affective. Among the tenses differentiated in our grammars, one is eminently subjective, the future. When we express the idea that an action will take place at a particular moment in the future, we do not as a rule limit our thought to the objective accomplishment of the action. We nearly always indicate, at the same time, how we ourselves stand in relation to this future act.

Hence, there is a difference between the future and the past. The latter is an objective tense, because it no longer depends upon us and we have no influence upon it. It is, as it is described, an historic tense. The future, on the contrary, is surrounded with all the mysteries associated with a contingency, and it allows room for a hundred feelings of expectation, desire, fear, and hope. If I say " I will do that to-morrow ", I not only affirm that the action will be accomplished by me to-morrow, but I clothe my sentence in a subjective atmosphere which to me lends it all manner of different shades of meaning, so that the sentence generally comes to mean that " I desire " or " I agree that ", or " I am afraid that ", or simply " I intend " [to do that, etc.].

The history of the future tense in different languages confirms these observations.[2] The future is frequently expressed in terms of will or desire, that is to say, it is in origin an affective

[1] Ed. Hermann, *Griechische Forschungen*, i, Leipzig (1912), p. 203.
[2] V. Magnien, **XC**, and Ribezzo, **CCXXVII**.

expression. Chinese forms its future by prefixing to the verb the element *yao* " to will ", *wo yao lai* (I will come—literally : " me will come "). English has " I will " or " I shall do ". Modern Greek has replaced the old future by an analytical construction which goes back to *θέλω ἵνα* " I will that " (see p. 58). In Bulgarian, since the thirteenth century, the future has been expressed by means of the verb *chotěti* (to will), employed as an auxiliary.[1] In French, certain patois have *Il ne veut pas pleuvoir* for *il ne pleuvra pas*, and, as we know, the French future of the type *aimerai* originates from the combination *amare habeo*, where the verb *habeo* indicates the part the speaker means to take in the action. The fact that the future is expressed by forms so varied and so frequently altered, proves that this " tense " is largely affective (cf. p. 214).

Duplication is another of those processes which have their origin in affective language and which become simply grammatical devices when applied to logical language. We must look for its starting-point in the expression of an emotion which has attained the force of a paroxysm. In many languages the superlative consists in the repetition of the adjective. It is evident that here grammatical use has sprung from affective use. Originally repetition was only a method of giving additional emphasis to an expression : *c'est beau, beau.* Gradually, however, this procedure lost its emotive value, and it seemed a convenient method of indicating superabundance and excess, quite independent of any expression of feeling. *Il est gros gros*, instead of *il est très gros.* This is the only form of Semitic superlative, still currently used in Ethiopian, for example. Modern Greek has *ζεστὰ ζεστὰ κολλούρια* (piping hot jam-rolls), *εἶσαι πολὺ πολὺ κακός* (you are exceedingly naughty).[2]

Nevertheless, languages like French, in which this procedure has never become simply grammatical (since French grammar has other ways of rendering the superlative), have been able to preserve the affective value of repetition. Thus, *il est gros gros* does not convey exactly the same meaning as *il est très gros.* We can still better sense the difference by comparing two sentences like *Il n'est pas très joli* and *il n'est pas joli, joli.* Let us suppose these sentences to be used ironically ; the irony is greater in the second than in the first case.

[1] Vondrák, **CCXVII,** vol. i, p. 178. [2] Pernot, **CIX,** pp. 90, 160.

Duplication, such as is found in the verbal system of the Indo-European or Semitic languages, has certainly an affective origin. As we know, it serves several purposes in these languages. One of the most distinctive in Indo-European is that of indicating a completed action. This is the value seen in the duplication of the old Greek perfect.[1] Repetition of the initial syllable of the root gave it an emphasis corresponding to the semantic value of the verbal form. In Semitic, duplication of the verb merely consists in the lengthening of the consonant, that is to say, in the substitution of a so-called double consonant for a single one (see p. 23). Here also the affective value is quite clear. It serves to characterize an intensifying agent [2]: Arabic, *chábat* (he struck), *chábbat* (he struck hard), *kásar* (he broke), *kassar* (he broke into pieces), etc. The nouns, too, show traces of a very old method of forming the plural by duplication, obviously of affective origin.

These are all cases in which the expression of feeling has become a grammatical process, and where logic has taken over the affective language. The converse is also frequent. In all spoken languages there are quite a number of small words of purely emotional value, so little logical that they are sometimes used in a sense the very reverse of their real meaning. Not only words, but complete locutions having verb, subject, and complement, may thus be used, or brief sentences in which the speaker is quite capable of recognizing the individual words by the most elementary analysis. The whole conveys nothing to the mind but an emotion. Thus, *par exemple!* indicating astonishment, or *vous savez* making a concession. The expressive content of these phrases becomes stronger as their logical value is obliterated. The transition from the logical to the affective is brought about by the exhaustion of all significance in the first by over-use. The man who heard something that astonished him, replied: "Ah! *par exemple?*" indicating thereby that he expected the speaker to provide an illustration by way of example. Then it became a habit to say *par exemple!* to any unexpected affirmation which was not self-explanatory, even when no example could possibly be furnished in support of it. Finally, the exclamation came to take the place of the interrogation, and *par exemple* became a cry

[1] J. Wackernagel, **CCXX.**
[2] Brockelmann, **CXLVIII,** vol. i, p. 508.

of astonishment, doubt, defiance, anger, fear. The idiom tinged with various shades of meaning has now become an emotional expression ; but its genesis is quite clear as a derivation from the logical sense and can be easily reconstructed.

Language did not stop here. It is a property characteristic of affective formulæ that they are very quickly outworn. The affective significance becomes obliterated, and soon nothing remains but a colourless phrase. Spoken language freely punctuates its sentences with a mass of expressionless terms which are so much padding between the expressive words : *tiens*, *allez-y*, *penses-tu*, *voyez-vous*, *n'est-ce-pas ?* are common French examples. Every person finds himself using phrases of this kind in daily conversation. Originally logical, these forms have become affective, and end by becoming automatic. It is this last stage in an evolutionary process which deprives them at once of their intellectual and emotional quality.

Thus, affectivity penetrates into grammatical language, subtracts from and disintegrates it, and this action largely explains grammatical instability. The logical ideal of grammar would be to have an expression for each function and a single function for each expression. To realize such an ideal, language would have to be as stable as algebra whose every formula, once established, remains unchanged in standard for every possible operation. But sentences are not algebraical formulæ. Affectivity always envelops and colours the logical expression of thought. We never utter the same sentence twice : the same word is never used twice in exactly the same sense ; no two facts in language are absolutely identical. The reason for this lies in the circumstances which ceaselessly modify the conditions of our affectivity.

CHAPTER V

Morphological Mutations [1]

THE morphological structure of every living language is unstable. This has already been made patent by the facts mentoined in the preceding chapter. Even when we are studying a dead language, stabilized by the labours of the grammarians, as soon as we attempt to bring order into it we still recognize in it a number of irregularities and contradictions. Quite apart from individual " mistakes " which have sometimes been made by the most correct writers, certain " defects " are inevitably encountered in the morphology of every language, even of the most highly cultured. Every rule has its exceptions, which are not logically justified. In short, the morphological system used by every speaker contains within itself as many causes of change as the phonetic system.

There is a difference, however, in the manner in which the two systems become subjected to these changes. Contrary to the large number of phonetic changes which phonemes undergo independently of words (cf. p. 36), morphological changes bear only upon words, and not upon morphemes in general. This is not only because morphemes generally form integral parts of words, but primarily because the causes for morphological change lie not in mental categories but rather in the uses to which language puts them.

Morphological changes always start from a given use, and accordingly always have a limited range. It is not the system which is modified, as in certain phonetic changes, but only one of the elements of the system, and this again in connexion with a given use.

The difference between the two processes is shown in their results. Phonetic development is complete, and leaves no survivals ; it substitutes a new condition for an old one (see p. 37). On the other hand, morphological evolution rarely affects all the cases upon which its laws have any bearing, but side by side with the new forms engendered it often permits a

[1] See Meillet, *L'évolution des formes grammaticales* 'xlii, 1912, p. 384).

smaller or larger number of old forms to persist, and these continue to be used. Hence, there are survivals from each stage of morphological history. In French, the infinitive *courir* has been substituted for the old form *courre*, but *chasse à courre* still remains, and infinitives like *rompre* and *moudre* have continued in use. The existence of the plural *les chacals* does not prevent the form *les chevaux*. *Vous dites* has been preserved in the second person plural, but *vous prédisez*, *vous contredisez* are also used, whereas *vous contrefaites* agrees in form with *vous faites*. The French still say *l'Hôtel-Dieu*, *le monument Victor Hugo*, *la rue Gambetta*, but the preposition is used in cases like *la maison de Dieu*, *les poésies de Victor Hugo*, *la politique de Gambetta*, etc. These contradictions are almost imperceptible in a language, which, in any case, suffers from them in no way.

Two general tendencies dominate morphological changes; one comes from a desire for *uniformity*, and tends to eliminate morphemes which have become unusual; and the other comes from a desire to *express*, which tends toward the creation of new morphemes.

We eliminate the unusual morphemes by reducing them once more to rule; that is to say, the need of uniformity is satisfied by recourse to *analogy*.[1] This term signifies the process by which the mind creates a form, a word, or a turn of expression, according to a known model. The child who says *j'ai li* for *j'ai lu* in imitation of *j'ai ri*, or who asks someone to *déprocher* him from the table, after he has been *approché* to it, creates two analogous forms. It is by analogy that an ignorant person, priding himself upon his correct speaking, would say *je ne me remets pas de vous*, as he might say *je ne me rappelle pas de vous*, on the model of *je ne me souviens pas de vous*.

Analogy is, indeed, the foundation of all morphology. We always follow analogy in speaking: the paradigms provided by grammars are only models to which pupils are invited to conform. I know, for instance, that to the infinitive *finir* there is a corresponding future *finirai*. When I happen to want to use the future of another verb ending in *-ir*, *crépir*, for example, or *polir*, I do not hesitate to say: *je crépirai*, *je polirai*. But

[1] V. Henry, **LXXXII**; Giles, **CXXXII**, p. 58; H. Oertel, **CXXXVII**, p. 150; H. Paul, **CLXXXVIII**, p. 96; etc., cf. Meillet, **IX**, vol. ii, p. 860.

if I continue in the same way, and form the future *venirai* from *venir*, I am creating by analogy a form condemned by use. Nevertheless, history shows that this is the kind of creation which finally prevails. For a long time, *je tressaudrai*, *je défaudrai*, were used as the futures of the verbs *tressaillir* and *défaillir*; to-day, these futures are formed regularly: *je tressaillirai*, *je défaillirai*, and the triumph of these forms has been due to the influence of the regular conjugation.

Philologists have long expressed analogy in an algebraic formula of proportion: $a : b :: c : x$, i.e. *finir* is to *finirai* as *tressaillir* is to *tressaillirai*. Thus, mathematically, was the new future arrived at. But we must always avoid applying mathematical reasoning to objects whose character or complexity do not admit of it. In this case algebra does not give a correct idea of what happens. It risks giving the impression that the change is voluntary and conscious, when in reality, it is quite the contrary. Besides, the law rarely involves only four terms. The form that draws an analogy is not, as a rule, an isolated element but a symbol which sums up several varied elements. If we wish to remain on algebraic ground, the formula should, at least, be corrected to $p : p' :: a : x$, where p and p' represent infinite quantities. Indeed, on the one hand, it is not only the infinitive *finir* which has given rise to *tressaillirai* from *tressaillir* by comparison with *finirai*, but all the forms common to the two verbs. On the other, the action of *finir* is the representative form reinforced by that of all verbs ending in *-ir* with a future in *-irai*.

But the chief defect of algebraic formulæ in this matter is that they take no account of the respective values of the forms. There is a good explanation for the success of the analogy in the case of the futures of *tressaillir* and *défaillir*: if they have been brought back into line with the rule, it is because they are very rarely used. In the indicative present, on the contrary, we continue to say *nous tressaillons*, *vous défaillez*, despite *nous finissons*, *vous finissez*. The force of analogy is powerless here because the indicative present is more frequently used than the future. Hence, everything depends on the struggle for dominance and resistance between the various forms the speaker has in mind. Analogy depends, to a certain extent, upon the law of least effort, which forbids the overloading of the memory with useless material. The

forms it eliminates are weak forms in the sense that, being rarely employed, memory does not guarantee them. Analogy can only triumph through the failure of memory ; the irregular form, rarely used, is forgotten and remade according to the rule.

In their linguistic apprenticeship children create a considerable number of new forms, guided by analogy. Most of these new creations are corrected later on, for they are generally only individual variations resulting either from faulty understanding or incomplete knowledge of the language. But there are some which conform so well to the general sentiment of the language that they are finally retained. It may happen that all the individuals of the same generation are spontaneously led to make the same mistake, which is then imposed upon them like a law, and becomes the rule. The efforts of the schoolmaster are then powerless to effect any change. There are certain frankly incorrect expressions which are commonly employed even by cultivated people. We are quite astonished to learn that grammar does not sanction them.

Grammar is often at odds with the natural trend of the language. In a country where grammarians exercise a great influence the language is less prone to give way to the force of analogy ; analogical creations are stifled early, and do not survive. In order to prevail they must be often and regularly repeated. In the sixteenth century, when the work of the grammarians had not yet acquired the range and efficaciousness it has since attained, we find a fair number of mistakes in use which were yet unable to acquire the force of law.[1] Rabelais said *je finois* for *je finissais* ; we have kept only the latter form. To make up for this, however, our contemporary language has succeeded, in spite of grammar, in imposing the use of certain turns of expression condemned up till the present. Every one says *je m'en rappelle* instead of *je me le rappelle*, and the barbarous phrase *de façon à ce que* for *de façon que* is coming more and more into spoken, and even written, use. We must admit, even while we regret, that these faults are a natural tendency of the language.

However, there are forms which resist analogy and are therefore called irregular. The grammars of all languages, more or less, have irregular nouns and verbs. They are also

[1] Brunot, **LVII**, vol. ii.

called strong forms in contrast to the weak forms which allow themselves to be regulated by analogy. Strong forms stand outside the rule. They owe their resistance to the frequency of their use, which tends to keep them present in the mind, and does not tolerate their being altered. They are imposed with all their individual characteristics, and are generally, themselves, unfit to be taken as models or to serve as the starting-point for the action of analogy. Thus, the commonest verbs are generally strong, that is to say irregular, in all languages. The most irregular of all is the substantive verb, because it is most often used. The contrast between *il est* and *ils sont* in French is extremely old, and still recalls, at least in the written form, a procedure of the Indo-European conjugation, which is not preserved anywhere else in French. Latin still preserves traces of this type in its commonest verbs ; French has only the verb *être*, whose irregularity, however, does not seem to be threatened in any way.

Not that strong forms can never be assailed by time. In many languages the substantive verb shows traces of an analogical levelling which has modified its conjugation. In Polish, for example, the first person *jestem* (I am) has been remodelled upon the third person *jest* (he is). But these processes are generally limited and do not prevent the substantive verb from retaining its irregular form as a whole. Languages with a really rich " strong " conjugation, like German, have a chance of keeping it for a very long time, for the irregular forms mutually support each other. Doubtless, there are some which the language gradually eliminates and brings within the scope of the rule. It would be possible to make quite a list of the strong verbs which have become weak during the last few centuries. Their number is increasing, and the weak forms introduced side by side with the strong, finally prevail. Certain dialects have *ich verlierte* (I lost) instead of *ich verlor* ; *ich springte* (I jumped) for *ich sprang* ; *ich fangte* (I took) for *ich fing* ; *gefangt* (taken) for *gefangen*. In many verbs, the present indicative and the imperative have succeeded in levelling their paradigms. *Du fleugst, er fleugt,* from *fliegen* (to fly) are no longer correct, nor *du leugst, er leugt,* from *lűgen* (to lie). Certain dialects have *nüm* (take) or *hälf* (help), instead of *nimm, hilf*. The Mannheim dialect has *ich geb, du gebsch, er gebt,* instead of *ich gebe, du gibst, er gibt.*[1] In English, where the analogical

[1] Behaghel, **CXLIV,** p. 247.

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levelling prevails to an even greater extent, a very limited number of verbs have remained strong, and this number still tends to diminish. In *Pickwick Papers*, the Boots of the White Hart Inn says: "he *know'd* [knew] nothing about parishes," or again: "ven he *seed* [saw] the ghost," etc.—yet the verbs in question are among the most commonly used.

Sometimes analogy influences the same paradigm from within. In German, *wurde* is used in the singular instead of *ward*, by analogy with the plural *wurden*. The unification of the preterite paradigm took place early in German, and it is the vowel of the singular which has generally prevailed. Thus: *wir warfen* (we threw), modelled upon *ich warf* (Old High German *warf, wurfum*); *wir zogen* (we pulled) in imitation of *ich zog* (Old High German *zöh, zugum*). If the pair *ward wurden* has been retained to the present day, it is because of the importance of the verb *werden* (to become), and the frequency of its use; and if the pair *wurde wurden* has been created with the ending of a weak verb in the singular, it is due to the influence of pairs like *hatte hatten, wollte wollten, musste mussten*, etc., which are also used more or less as auxiliaries. This does not mean that analogical forms of the same type as *wurde* are not found in the history of Germanic tongues. In Old High German the verb *biginnan* (to begin) possesses side by side with the preterite *bigan* another more frequent form *bigonda* or *bigunda*. From the verb *fundan* (to find) Old Saxon used a preterite *funda* side by side with *fand*, and Old English likewise had *funde* in the singular by analogy with the plural *fundun*. But the creation of *wurde* is none the less independent. Every instance of analogical action demands separate treatment, and if we wish to understand the meaning of the analogy we must first discover its source.

This source always lies in some typical form existing in the language. It is not a case of carrying out some planned whole to which the mind addresses itself by means of successive acquisitions. Sometimes, doubtless, analogical action results in the diminution of the number of irregular forms, and in a reduction of the strong type. But this is not an absolute rule. It may happen that certain strong verbs will impress themselves upon the mind until they come to serve as models and involve several weak verbs along with themselves. Generally there are special reasons to justify the analogy. In German,

where the strong conjugation comprises many clearly defined categories, this process has taken place more than once ; *ich frage* from *fragen* (to ask) is an old analogical creation, already on the road to complete disappearance. But in several dialects we find *ich jug* from *jagen* (to hunt), *ich kuf* from *kaufen* (to buy), etc. These verbs now belong to the regular categories of strong verbs. On the other hand, in English, as in French, the strong verbs are really irregularities, isolated exceptions which do not constitute a system whose mechanism is apparent in the consciousness of the speaker. Nevertheless, it may happen that these irregular verbs will be grouped in twos or threes, thus mutually strengthening and guaranteeing each other. For example, the verbs *pondre* (to lay [eggs]) and *tondre* (to shear) which originally had nothing in common (in Latin, *ponere* and *tondere* belong to two different conjugations) are now conjugated in the same way.

There is little logic in all this. " The mind, unstable by nature, never goes straight ahead. Why ? Because it seeks to follow after analogies ; because, blind to the true relations between things, it runs after mere external resemblances, and, in its pursuit, does not always realize where it is going." This thought of Jean Paul's (*Tagebuch*, 9th August, 1782) can be applied to the processes we are studying here. The principle behind them, doubtless, is the tendency to draw forms that differ within the bounds of a single form, which results from the natural laziness of the mind. But this tendency toward uniformity is not, as some writers declare, a tendency toward univocability. Univocability is a logical principle according to which each grammatical function should be expressed by a single sign and each sign express a single function. It is a sort of ideal adaptation of grammar to logic. It can be seen clearly enough from what has gone before how far this ideal is from being realized. The mind never completely changes its morphology ; it merely concentrates upon one part of the system at a time—and that a very small part. And as the influence it exercises upon the different parts is never dictated by a desire for achieving any methodical design, but is suggested by haphazard circumstances, the result, as a whole, generally lacks coherence and homogeneity.

The history of the formative *-er* in German is very instructive in this respect.[1] This formative, which characterizes the plural

[1] Streitberg, **CCX**, p. 103.

of a great many neuter words, is properly a suffix generalized by analogy. Among the neuter stems in Indo-European, some are characterized by a suffix *-es-*, recognized in Latin (in the form *-er-*), in the declension of the type *genus*, plural *gen-er-a*, etc. In German, where the sibilant had likewise to be changed to *r* under such circumstances, the neuter words of this type, after the loss of the old finals, were provided with a new final *-er*, which served to contrast the plural with the singular and, accordingly, to characterize the plural. This, being a very expressive formative, there was little risk of its being lost, and it was extended by analogy to quite a number of neuter words that were not originally *-es-* stems. Hence, by analogy with *Kalb* (calf), plural *Kälber*, which was one of these *-es-* stems, we have *Haus*, plural *Häuser*; *Buch*, plural *Bücher*; *Fass*, plural *Fässer*; *Glas*, plural *Gläser*; *Geld*, plural *Gelder*; *Wort*, plural *Wörter*. Nevertheless, quite a number of neuter words remain which form their plural otherwise: *Mass*, plural *Masse*; *Ross*, plural *Rosse*; *Auge*, plural *Augen*, etc. On the other hand, the formative *-er* is found in many masculine words: *Rand*, plural *Ränder*; *Gott*, plural *Götter*; *Wurm*, plural *Würmer*, etc., so that analogy has not succeeded in giving a single function to the word-ending it created.

What are we to think, then, of artificial languages built upon a logical plan erected in advance? Such languages are only possible as special languages—technical languages or signal codes. The agreement of the few people who use such languages suffices to maintain them unchanged. But it would not do for these languages to become living tongues for then they would quickly suffer change. Different values would be assigned to the different forms, and certain forms would dominate others; the law of analogy would come into play, and ultimately chaos would succeed to the beautiful pristine order. Dominant forms, in a way, constitute centres of analogical irradiation; they attract other forms to themselves from every direction, and for quite different reasons. There are in consequence intersecting analogical planes which our rectilinear type of reasoning cannot reconcile.

The ideal logical language is but a dream. It makes one think of the gardener who imagines that because he has planted seeds exactly alike in perfectly methodical order and given them exactly the same care, his garden must therefore always have

plants of the same size, arranged in the same way, with flowers and fruit in equal quantities. Too many different causes, which cannot be controlled by human power, modify biological conditions. It is the same with language, where analogy is often the enemy of logic, although it responds to the desire for uniformity and employs reasoning to satisfy it.[1]

The need for expressiveness, like that of uniformity, is never completely satisfied ; but in seeking to satisfy it, the mind is led to repair the wear and tear of forms, and consequently to transform morphology.

In the phonetic evolution of a language certain morphemes become so debased that they are utilizable no longer ; sometimes they are even completely done away with. They must then be either restored or replaced. In an inflected language like Latin, when this process attaches final sounds, the whole inflection has to be replaced. The morphological debris remaining after the action of phonetic laws have done their worst, are rarely significant enough to be preserved as such. Thus, in the Vulgar Latin of the first centuries of our era, the declension gradually disappeared. All that remains of it in each type of inflection is the contrast between the nominative and objective case, sometimes deliberately reinstated by analogy. The neo-Latin conjugation also owes much to analogy. In French, the formatives *-ons* and *-ez*, characteristic of the first persons plural, are the result of analogical extension. The element *-iss-* in *finissons, finissez, finissais*, etc., is the Latin inchoative suffix *-isc-* ; it was taken from certain verbs to be extended to the whole conjugation of which it subsequently became the characteristic sign. The formative *-u* of the past participles *eu* (formerly *évu*), *vu* (formerly *véu*), *lu, tenu, rompu*, etc., are derived from a participial ending *-utus*, Latin examples of which are rare. But here the losses from phonetic wear and tear had also to be repaired. The old participles *habitus, uisus, lectus, tentus, ruptus*, etc., were not, or could not be, represented in French except under forms which had no

[1] For artificial languages consult Couturat and Leau, **LX** and **X**, 1908, p. 761 ; 1911, p. 509 ; 1912, p. 1. See also the *Bulletin de la Société française de philosophie*, 1912, pp. 47–84. Objections of a linguistic nature, formulated by Brugmann and Leskien, "Zur Kritik der künstlichen Weltsprachen," Strasbourg (1907), have been discussed by Baudouin de Courtenay (**XXIV**, vol. vi, p. 385) ; cf. **XXX**, vol. xxii, p. 365.

morphological expression. Hence, the analogical extension of a significant final element.

All this, however, was not enough. Even if analogical grafting had revived the remainder of the Latin inflection it would have been difficult to give expression to all the grammatical categories. Another process intervened and this consisted in giving added importance to the prepositions developing the article and utilizing the pronouns—in a word creating an entire system of accessory words with the function of morphemes. To-day, we say *la sœur*, *de la sœur*, *à la sœur*, or *je lis*, *tu lis*, *il lit*, whereas the Latins said *soror*, *sororis*, *sorori*, or *lego*, *legis*, *legit*. The starting-point for the French turn of phrase is assuredly to be found in Latin, where the prepositions, for example, had already many uses, and frequently reinforced case inflection ; but *à* and *de* in French are grammatical symbols with less concrete value than the Latin *ad* or *de*, which still possess a definite local value. Nevertheless, *ad* and *de* are already morphemes.

The Latin prepositions did not suffice for French ; new ones had, perforce, to be created ; and for that purpose, quite apart from combinations of Latin adverbs or prepositions like *dans*, *après*, *sous*, *avec*, etc., it used other words existing in the language. Thus, it took *chez* from the substantive *casa*. In certain regions of France we still find such place-names as *Chez Pierre*, *Chez Rolland* (Peter's house, Roland's house). Certain participles or adjectives have become true prepositions : "*pendant* la nuit," " *vu* les circonstances," " *nonobstant* la défense," " *excepté* le dimanche," " *malgré* la pluie," " *sauf* erreur," " *plein* la rue." Analogous facts are to be found in a great many other languages. Thus, in certain of the modern languages of India (in Singalese, for example) the genitive is formed by means of the element *ge* which is the old Sanskrit locative *gṛhe* (in the house) as though one were to say in French *le livre chez Pierre* instead of *le livre de Pierre*. The Hungarian formative *-vle-*, signifying the instrumental, which may be translated by " with ", is derived from the ablative of an old independent word *vāγl-* or *vāγd* " by force of, by means of ". In English, words like *concerning*, *past* (*half past two*), and similarly the German *trotz* (despite), *betreffend* (with respect to), or the Danish *undtagen* (except), etc., are genuine prepositions.

All these words have become " empty words " in the Chinese

grammatical sense (see p. 83). Over and above the analogical process it is really by the transformation of full words into empty words that morphology repairs its losses. The grammatical instruments which language employs are the debris of old autonomous words emptied of the meaning proper to them and used, like symbols, as simple exponents.

In many languages we can follow the evolution of numerous elements such as prepositions, conjunctions, or articles; it conforms to this general type. In Greek μετά (with), μέσφι, μέχρι (up to), are etymologically connected with a word signifying "milieu" as πεδά (after) is connected with the word for foot (cf. the preposition *yet* [after] in Armenian). Conjunctions of the type *lorsque* (at the moment that), *du moment que*, are foundin several languages. The Latin *magis* (more) has become the adversative conjunction *mais* in French, much like the late Greek μᾶλλον: from the idea "not this, rather that", we pass to "not this, but that". The definite articles in all languages are old demonstratives; and in Germanic, Celtic, modern Greek, and the Romance tongues, an indefinite article has been derived from a numerical noun signifying "oneness". The word for man in French, Germanic, Celtic, and Armenian has become a grammatical instrument serving to express the indefinite (Fr. *on dit*, Ger. *man sagt*, Bret. *neuz ketden*—"there is no one," Arm. *marth egav* "has someone come?"); and sometimes the determinative (Welsh *y gwr* "he who", "which one").

The auxiliary verbs are also empty words. The English *to do* is used as a grammatical instrument in phrases like, *do you see?, I don't see.* German uses the same verb *tun* similarly, at least in dialect: *er tat schiessen* (he did shoot, he shot), *er tut sich wenden* (he does turn, he turns [himself] round). The same verbs are generally used as auxiliaries in all languages. Thus, the idea of "will" or "devoir" is one that simply expresses eventuality, the future (see p. 151). The idea of "to hold", "occuper", serves to indicate the perfect, or accomplished action. Hence, *I will go, I shall find, bidi anem* (I will do) in modern Armenian, *j'ai conquis* in French; *ich habe gedacht* (I have thought) in German; θὰ χάνω (I shall lose), ἔχω χαμένο (I have lost) in modern Greek, etc. In writing, we separate the empty word from the accompanying full word; but this is only an orthographic custom.

There are also cases in modern French where, after the

welding of the two elements, the empty word has become a suffix ; for example, in the futures and conditional : *j'aimerai je lirai*, which have come from the Low Latin *amare habeo, legere habebam*. The French adverbs of manner are formed by suffixing *-ment* to the adjective ; this suffix is merely the old Latin ablative *mente* from the word *mens* " mind ". In the first century B.C. we already find, in Latin, uses of the word *mente* which foreshadow this adverbial function : *constanti mente, obstinata mente, liquida mente* (Catullus, 64, 210, and 239 ; 8, 11, 63, 46) ; *sagaci mente* (Lucretius, 1, 1022). There is nothing surprising in this : Greek [1] possessed expressions like *εὐδόξῳ φρενί* (Aeschylus, Choeph., v. 303) or *γηθούσῃ φρενί* (ibid., v. 772) which can be translated exactly into Latin as *gloriosa mente* (French *glorieusement*) or *læta mente* (Italian *lietamente*). These locutions were built on a current model. In Latin, as in Greek, it often happens that words with varied meanings, when taken in a general sense, may be construed with adjectives in a quasi adverbial character (*ἀέκοντι νόῳ, νηλεῖ θυμῷ, κακῇ καρδίᾳ, τλήμονι ψυχῇ* etc., *studioso animo, turpi corde, ardenti pectore, miris modis, certa lege*, etc.). From among all these Latin locutions, in which the substantive preserves its value, only slightly attentuated, the Romance languages have adopted the one containing the word *mente*, and turned it into an empty word. Other languages use other words. Thus, German takes readily to the word *Weise* (fashion), using it as a sort of adverbial suffix : *glücklicherweise* (happily). The Scandinavian languages use the word *vis* (fashion) in the same way : Danish *heldigvis* (happily) from *heldig* ; Swedish *lyckligvis* (ditto) from *lycklig*. Armenian, again, has created adverbs of manner by means of words like *bar* (fashion) and *pês* (form, aspect) ; for example, *brnabar* (powerfully) from *burn* (power), *darnapês* (bitterly) from *darn* (bitter). Having adopted one of these equivalents from the many at its disposal the mind dismisses the others.

The same thing has happened in French with the negative adverb. We know how contagious negation generally is, and how it extends to the words with which it comes into contact : *aucun, personne, du tout* are good French examples, like *nada* (from *rem natam*) in Spanish. First of all, the French said : *je ne vois point, je ne mange mie, je ne marche pas, je ne bois goutte,*

[1] Paul Shorey, **XX**, vol. v (1910), p. 83.

etc., all sentences in which the negation was expressed by the adverb *ne*, the words governed by the verb being justified by the meaning : *je ne vois pas un point, je ne mange pas une mie*, etc. But the negative value communicated itself to the governed word so thoroughly that its real value was destroyed, and the word became a negative which can now be used with any verb to negative any fact. The words *pas* and *point* have remained negative adverbs. Nevertheless, they are not used indifferently by the same person : *goutte* is retained only in certain locutions (*je n'entends goutte, je ne vois goutte*), and *mie* has completely disappeared from the spoken tongue ; but, for a long time, *je ne dors mie, je ne souffle mie, je n'écoute mie*, have been admissible ; this could not possibly have occurred if the smallest consciousness of the value of the word had been preserved.

Before becoming a simple suffix, the full word gradually and imperceptibly loses its own meaning. In languages that form a practice of making compound words it is easy to see how this comes about. With the word *Mann* as a second term German has formed a fairly large number of compound words : *Bergmann* (miner), *Dienstmann* (man-of-all-work), *Fuhrmann* (carrier), *Kaufmann* (merchant) : similarly, with the word *Frau* : *Hausfrau* (housewife), *Waschfrau* (washerwoman). These words are true compounds and are understood as such. The separate existence of *Mann* and *Frau* keep the compound construction alive, and the fact that the plurals *Dienstleute Kaufleute* are in current use, reinforces this sense of compound word-building. And yet it is certain that the two elements which form the compound do not impress themselves on the mind with equal importance. The stress put upon the first word throws the second into a subsidiary position, and here the stress accords with the meaning. It is the first element which is the significant part of the word ; the second has primarily a morphological value. *Bergmann, Fuhrmann, Kaufmann*, are respectively translated into French as *mineur, voiturier, négociant*, the second term of the German compound being replaced by a simple suffix, which is also quite expressive. Doubtless, one cannot say that the element *-mann* is a suffix in German, but it is certainly on the road to becoming one, and perhaps with time it will actually so become. The first element absorbs the mind's attention completely, the second is reduced to the rôle of a quasi suffix.[1]

[1] Ganzmann, **CLXIV**, p. 26.

In Germanic there are several suffixes which have been formed in this way. Old High German had *ni scouuos thu heit manno* (*non respicis personam hominum*, Matthew xxii, 15); then the word *heit* was used in compounds: *man-heit* (humanity), *vîp-heit* (femininity, women), and finally, it became one of the most generally used of modern suffixes (*Menschheit* = humanity, *Schönheit* = beauty, etc.). The creation of the suffixes *-lich* or *-tum* can be followed in the same way. The first is an old substantive signifying "body, form", still preserved to-day in *Leichnam* (corpse) or *Leichdorn* (corn [on the feet]); it is to be found as a compound in *gleich* with the same meaning as *semblable* or *like*, and it has become a suffix in the form *-lich* in *weiblich* (womanly [like a woman]), *lieblich* (love-ly [like to be loved]), etc. The suffix *-tum* was still an independent substantive in the ninth century, in Otfrid's poem (in the form *duam* = act or function); the form *rîhhiduam* (empire), to-day *Reichtum*, was used and, by extension, we get *Deutschtum*, *Yankeetum*, etc. The same tendency is to be found in Old English, where *wéfhad* corresponds to the *vîp-heit* of Old German, *cynedôm* (to-day, kingdom) to *Königtum* (royalty), *woroldlic* (to-day, worldly) to *weltlich*.

In losing the meaning proper to them, the words which had become suffixes acquired an abstract value which made them suitable vehicles of expression for one or other morphological category. Some, for example, express quality, others state; some characterize active nouns, others agental nouns. This abstract value does not prevent their being coloured too late with individual shades of meaning. Thus, the suffix *-ard*, which French has taken over from Germanic, where under the form *hard* it was used as the second element in proper compound names (Bernhard, Eberhard, Richard, etc.), assumed in French a pejorative significance, developed by means of analogy. But analogy did not operate in the case of such words as *buvard*, for example, or *foulard*, in which the suffix has retained its general abstract value without any affective shade, proving that the affective shade was added later.

The real characteristic of the empty word is its quality of abstractness. The more it is established as an empty word the more is its abstract value increased, so much so that certain morphemes end by becoming nothing more than algebraic symbols, untranslatable into another language. This is the

case with ἄν in old Greek or with *iti* in Sanskrit (see p. 75). There is no doubt that these morphemes were derived originally from full words which had a concrete significance in the language, exactly like the particles θά and ἄς in modern Greek (see p. 58). Hence, their evolution as morphemes may be said to have occurred during the passage from the concrete to the abstract, as much as from the particular to the general.

A good example, which sums up all the processes involved in the formation of morphemes, is furnished by the French interrogative particle *-ti*.

Gaston Paris was the first to point out the particular interest attaching to this particle, so common in contemporary speech.[1] Used as an interrogative, a form such as *il aime* in the third person singular, becomes, in mediæval French, *aime-il*, still in current use at the beginning of the seventeenth century. Under the influence of the third person plural, which ended in a *t* (*ils aiment, aiment-ils ?*), a *t* was introduced into the singular to reinforce the interrogative form, which otherwise ran the risk of disappearing for lack of definite expression. Thus, we have *aime-t-il*, which results from an initial analogical extension. In the expression of the interrogative, however, the third persons henceforth held a privileged position as compared with the others. The *t* which, in fact, did not exist in the non-interrogative form, since in the two cases (*il aime, ils aiment*) it is pronounced *èm*, was really a sign of interrogation, which the other persons (*aimé-je, aimes-tu, aimons-nous, aimez-vous*) did not possess. Among these one form, *aimé-je*, fell into a position of inferiority, in consequence of phonetic conditions, and in certain cases was even definitely excluded (*cours-je, lis-je, pars-je, sers-je*, etc.) ; two others, *aimons-nous* and *aimez-vous*, lent themselves to confusion with the reflexive and, accordingly, lost a good deal of their expressive value. This was an added gain for the interrogative third person, which was short and clear, and which, besides, was also used when the subject was a noun : *Pierre aime-t-il ?* Moreover, in this interrogative form, by a normal phonetic process, the ending *il* became *i* (cf. *coutil, nombril, persil*) breaking the bond which united it with the pronoun (*il aime, aime-ti ?*) at least in the verbs beginning with a vowel. It thus gradually assumed the value of an independent element specialized in an interrogative

[1] **XVIII,** vol. vi, p. 438 ; cf. vol. vii, p. 599.

sense. The final extension of the interrogative *ti* was favoured and its success finally assured by the natural tendency of French to attach the pronominal subject to the verb by a very close bond. Cases in which the two could be disunited became more and more rare : *je le dis, tu le sais* are replaced in the spoken tongue by *je dis ça, tu sais ça*, and one can foresee the day when the pronouns *je, tu, il, nous, ils* will no longer be separated from the verb. Thenceforward the inversion which marked the interrogative became less and less significant. The element *ti* in *Pierre aime-ti* was the simplest and most practical expression of the interrogative ; it was extended to *il aime-ti*, then to *j'aime-ti, ti aimes-tu, nous aimons-ti*, [*ces enfants*] *s'aimeront-ti*, with no change in the *subject-verb* order to which the language particularly clings.

The interrogative particle *ti* thus owes its extensive use to a series of analogical extensions, favoured in each case by special circumstances. To-day it is an abstract symbol of general bearing, since it is applied indifferently to all types of interrogative sentence. It is the specific interrogative symbol which the French language needed.

We can see with what flexible and persistent ingenuity it was evolved.

If there were no orthographic tradition in French, and if the language had to be collected and compiled to-day like a primitive tongue, the particle *ti* would not be separated from the verb preceding it. *ʒemti, ʒemtipa* (=*j'aime-ti, j'aime-ti pas*) would be written as single words, and the interrogative particle, like the negative, would pass for a formative element—for an affix on the same grounds as a Greek or Latin suffix or word-ending. The origin of *-ti* or *pa* could in no way have been divined ; they would be considered as grammatical devices lacking any meaning of their own.

It is probable that the Indo-European or Semitic inflection is the result of the agglutination to the stem of elements originally independent, which floated at first in its vicinity, and in time became one with it.[1] We are ignorant of the points of departure. We would be vain to try to find the primitive form and significance of the formatives of the first

[1] See particularly Hirt, **XXX**, vol. xvii, p. 36 and ff. ; H. Oertel and E. F. Morris, " An examination of the theories regarding the nature and origin of Indo-European inflection " (**XXII**, vol. xvi, pp. 63–122).

person plural or of the ablative, of the suffix of an inchoative verb, or of an abstract substantive. But we can be sure that these inflexional elements are the result of the analogical extension of old autonomous words which have been more or less deformed and reduced to the rôle of grammatical devices. Indeed, there is no other way by which morphology can be repaired and renewed.

PART III

VOCABULARY

CHAPTER I

The Nature and Extent of Vocabularies[1]

WE have so far taken no account of the semantic value of words, that is to say, of their meanings independent of the part they play in the sentence. Although morphemes are often part and parcel of a single whole with semantemes to such an extent that word analysis becomes impossible (see p. 87), morphology is just as independent of the semantic value as of the phonetic value of words. *Vocabulary* is the term used to indicate all the words belonging to a language considered from the point of view of their semantic value. The three systems, pronunciation, grammatical forms and vocabulary, may evolve separately and under the influence of different causes. Certain languages renew their vocabulary without modifying their phonetics or morphology. In literary Urdu (a branch of Hindustani) there are entire sentences whose grammar alone is Indian but whose vocabulary, from beginning to end, is Persian. The Armenian gipsies use a speech whose pronunciation and grammar are Armenian, but whose vocabulary is foreign to Armenian.[2] Different vocabularies can be cast in the same grammatical mould.

The science dealing with the study of vocabulary is called *etymology*.[3] It consists in examining all the words in the dictionary one by one, and making some attempt to give them their proper status, by indicating whence they came, when and how they were formed, and through what vicissitudes they have passed. It is therefore an historical science. It determines the oldest form of each word as far back as historical data extend, and studies the manner in which it has been transmitted, and what modifications in meaning and use it has undergone. To seek to demonstrate the importance of this science would be idle. It is thanks to etymological data that

[1] K. O. Erdmann, **CLVII**; Rozwadowski, **CXCIII.**

[2] Finck, "Die Sprache der armenischen Zigeuner," in the *Mémoires de l'Académie de St. Petersburg*, vol. viii, No. 5 (1907).

[3] For etymology, see the works of M. A. Thomas. Refer also to Thurneysen, **CCXIV.**

comparative phonetics and morphology can now be established on a firm footing. Etymology, phonetics, and morphology lend each other mutual support. Once in possession of the rules governing the connexion between sounds and grammatical forms the etymologist who applies these rules correctly can make a most useful contribution to the study of language.

Etymology, however, gives a false idea of the nature of a vocabulary, for it is concerned only in showing how a vocabulary has been formed. Words are not used according to their historical value. The mind forgets—assuming that it ever knew—the semantic evolutions through which the words have passed. Words always have a *current* value, that is to say, limited to the moment when they are employed, and a *particular* value relative to the momentary use made of them.[1]

In turning over the leaves of an etymological dictionary the fact which appeals to us most forcibly, after the large number of words without any plausible etymology, is the unexpected variety of changes which the meanings have undergone. The terminology used in our military grades, from *corporal* to *general*, including *sergeant*, the French rank of *adjudant*, *lieutenant*, *captain*, the French rank of *commandant*, represents a very heteroclitical collection. It is the same with all nomenclatures whose terms we should never be able to interpret in the light of etymological data alone. Use lends to each of these words a precise value irrespective of any meaning they may have had in the past. The term *maréchal*, the highest French military dignity, is derived from the Old High German *marah-scalc* (stable-boy), from which was formed the mediæval Latin *mariscalcus*, so that to the etymologist the *maréchal de France* and the *maréchal ferrant* bear the same name.

It is entirely due to chance if the same group of sounds, in the same language—French, for instance—serves to denote *calcul mental* and a *calcul rénal*. It so happens that the word is etymologically the same. On the other hand, the etymologist distinguishes two different words in the sentence *il loue une maison* and *il loue la vertu*, or *il pratique le vol à la tire* and *le vol plané*. There is as great an element of chance in the association of the meaning of the Latin words *locare* and *laudare* in the same group of sounds, and in the ideas of committing theft and of mechanical levitation, or of arithmetical reasoning and

[1] Bally, **XLV**, pp. 21 and 47.

stone in the kidney. To the speaker the three cases are all alike. The homonym exists independently of the historical connexions of the words.

This is not all; when we say that one word may mean several things, we are, in a sense, the dupes of an illusion. Among the divers meanings a word possesses, the only one that will emerge into consciousness is the one determined by the context.[1] All the others are abolished, extinguished, non-existent. This is true even of words whose significance appears to be firmly established. When, for instance, I say: "ce terrain *rapporte*" (brings in money), "ce chien *rapporte*" (retrieves), or "cette enfant *rapporte*" (tells tales), I am concerned simply with three different verbs. Likewise, when I say: "Ne fréquentez pas Mlle. X.: c'est une *fille*," or "Mme. X. a eu un bébé, c'est une *fille*", or "Je vous présente ma *fille*", I am really employing three different words, between which neither I nor the listener establishes any connexion at the moment when I am speaking.

To admit that these words may have a fundamental meaning and secondary meanings derived from this, is to state the problem from the historical point of view, which is not our concern here. Doubtless, to the person who, at a single glance, can visualize the whole development of the language, the steel *plume* is the outcome of the goose *plume*. Here the same word in the course of time has taken on two different acceptations; and, therefore, in a dictionary which prides itself upon indicating the entire range of meanings which one word may possess, it is well, in giving the meaning of pen in French, to place the meaning of the steel pen or *plume* after the meaning of goose-quill. But the Frenchman of to-day really recognizes two different words in these two different uses. No one endures the slightest perplexity or doubt upon hearing two sentences like "il vit de sa *plume*" and "il s'est arraché *une plume*". Everyone understands immediately that, in the first case, "il" refers to a writer, and in the second to a bird. The two words are as different as any homonyms can well be. The language really contains two words "plume" corresponding to the two preceding meanings, just as it contains four words pronounced "so" (which are, however, distinguished in writing) in such sentences as "ils ont déposé leurs *seaux*"

[1] Cf. Paulhan, cited by B. Leroy, **LXXXVII**, p. 97.

(buckets), " ils ont apposé leurs *sceaux* " (seals), " la nature ne fait pas de *sauts* " (leaps), " ces enfants sont des *sots*."

It may be objected, however, that there was a time when the word *plume* was used metaphorically. But this use was transient. In current usage, a word has only one meaning at a time. Although he knows that a *plume* (goose-quill) was once used for writing, the person who says " Je prends ma *plume* pour écrire un mot " uses the word *plume* in the sense of an instrument, and has no idea of using a metaphor ; his reader understands it in exactly the same way. The metaphor is an abridged comparison and to appreciate it requires an effort which we are willing to make when reading a book at leisure, but for which there is no time in conversation. Language demands precision and clarity; in conversation our chief care is to avoid ambiguity. By definition, the pun is not a normal figure of speech but a form of art, and it calls for special attention like every artistic production. Those who are addicted to this practice are well aware of the necessity for preparing the ground beforehand, of gaining the attention of the listener who, once forewarned, is on the look out for this witticism. If it were true that a word always displays all meanings at once, we should be perpetually afflicted, in the course of conversation, with the irritating impression produced by a series of plays upon words.

This conclusion will doubtless shock the purists who attach supreme importance to the choice of metaphors and who banish all those not exactly adapted to the context. They might object that the art of style is not vanity. To condemn those incoherent metaphors which too often encumber official speeches or articles in the popular press, is not necessarily to set an exaggerated store on form. To say " to navigate the car of State over a volcano ", or to describe a *débutante* as a " budding star who already sings with a master hand " is assuredly not polished style. In all languages there are similar cacologies which are often quoted jestingly. The German sentence : *der Zahn der Zeit, der schon so manche Träne getrocknet hat, wird auch über diese Wunde Gras wachsen lassen* means, literally, " the tooth of time, which has already dried so many tears, will also allow the grass to grow over this wound." Sentences of this kind are certainly ridiculous ; but they are only so upon reflexion ; and in the heat of improvisation the ridiculous is not always apparent. Their error lies in the association of

words which, considered metaphorically, have no connexion. But the person who allows them to slip into his conversation may allege in his defence that he had not intended them for metaphors. He wished merely to employ conventional expressions and took them just as he found them, consecrated by use; in fact, each expression taken by itself suited the object he had in view. It is piling up one upon the other of such metaphors that provokes laughter.[1]

Everyone is liable to make similar mistakes if he is not careful. This is frequently the case with orators who improvise. Even talented writers commit such offences. German scholars have discovered not a few in Schiller's prose. They are really objectionable only when there are too many of them, or when the images they evoke are especially ridiculous, as in the preceding examples. Still, the purists condemn all expressions which contain mixed metaphors which are really incorrect combinations of words. When we hear them on the lips of the common people we do not immediately condemn them for an offence against reason. A large number of current expressions, admitted into dictionaries, and employed by the best writers, result from catachreses that are sometimes monstrous. It is absurd to say *on remplit un but, on abîme sa robe, on embrasse une carrière,* or *on jouit d'une mauvaise santé*; these idioms are rightly disapproved by purists. It is equally absurd, however, to speak of *un débarcadère de chemin de fer,* where one certainly does not get into a *barque,* to say *on arrive à Clermont-Ferrand* (for there is no *rive* there, because there is no river); *on s'abonne à un periodique* (which cannot be compared to a *borne*), *on avale un verre d'eau* (which does not *avaler* or descend a valley). These idioms, nevertheless, belong to the best language. They are no longer felt to be illogical, and it is difficult to realize that in the seventeenth century certain purists of the Academy condemned the expression *fermer la porte,* claiming that one must say *pousser la porte* and *fermer la chambre.*[2]

We no longer perceive, except upon reflexion, what linguistic outrages are concealed in such expressions as *cul-de-sac, pet-de-nonne,* or *vesse-de-loup*; the metaphor has disappeared in the use now made of the words, which have become nouns, like any

[1] Erdmann, **CLVII**, p. 172.
[2] Saint-Evremond, *Comédie des Académiciens*, act iii, scene 3.

others, signifying a certain kind of street, pastry, or fungus. We do not hesitate, moreover, to use the expression " on est *acculé* aux pires extrémités " (from L. *culus*), for the etymological force of the word has disappeared.

In all the cases we have just examined it is the context which determines the value of the word ; the atmosphere with which the word is surrounded fixes its value instantly and in each case. It is the context which, despite the variety of meanings the word possesses, imposes upon it a " particular " value ; and it is the context again which frees the word from all former images accumulated in connexion with it in the memory, and which gives it a " present " value. But independently of the use made of it the word, with all its latent and real meanings, still lurks in the mind ready to rise up and adapt itself to any circumstances which may call it forth.

The variety of uses to which a word may be put does not necessarily confer a general value upon it. Between the different special values which the word may possess, no mean can be formed ; each is there, in its entirety, awaiting only a sign to assert itself. If there is indecision, it is not as to its meaning itself, but as to the circumstances under which it is to be introduced. Thus, for instance, I have in mind the word *fille* ; the different acceptations previously indicated are not confused in my mind. They remain each at my disposal until such time as I have need of them. Yet I can think only of the one word, *fille*.

The word itself is not isolated. It is graven on my mind with every context in which I have previously introduced it, and with all the combinations into which it has entered : *filles et garçons, une bonne fille, une fille-mère, les filles du Saint-Nom de Jésus*, etc. I attach it to several families of words at once. According to my imaginative faculty it evokes a varying number of images which emanate from it in every direction.

No word is isolated in the mind. On the contrary the mind always tends to group words and to discover new bonds between them. They are always connected with a certain linguistic *family* by the semanteme or morphemes characteristic of them, or even simply by the phonemes of which they are composed. We feel that the words *donner, don, donation, donateur, donataire*, etc., form a single family defined by a

single common element, the root *don*, whatever may be the different meaning of its derivatives. In the same way, independently of the particular meaning attached to each of the words, *bonasse, blondasse, mollasse, cocasse, jaunasse, dégueulasse* (the last is a special slang form), we may establish a bond between them by reason of their common possession of the suffix *-asse*, clearly pejorative. However, *donation, donateur, donataire*, are grouped respectively with words like *adoration, armateur, destinataire*. Hence, we see that there are groups which intersect one another.

The grouping of words, according to their phonemes, is of great importance in what is known as popular etymology (see p. 49). The mind tends to establish relations between the external forms of words which are sometimes inversions as regards their meaning and contrary to common sense. A vague resemblance to some word more frequently used or better known sometimes brings about an assimilation from which strange deformations arise. The Latin *culcita puncta* (literally, punctured or stitched coverlet) has in French become *courte-pointe* (and in English, *counter*pane) instead of *coulte-pointe*, although the meaning of the French word *court* has no relation whatever to the object defined. The English *country-dance*, itself borrowed from the French, has passed back into that tongue under the form *contredanse*, which does not make sense. We know the droll forms that technical names of illnesses or remedies often assume in the mouths of the common people ; they form an inexhaustible mine of jokes for makers of almanacs. If the *liqueur à pioncer* (for *liqueur opiacée*) is a savoury expression (*pioncer*, to snooze) and full of meaning, no reason, on the other hand, justifies *lait d'ânon* (for *laudanum*).

Attention has been called to the case of *chantepleure*, a kind of funnel having no more to do with song (*chant*) than with tears, but whose name, in its successive transformations, is an excellent example of popular etymology into which meaning apparently does not enter. Proper nouns (using this word in its broadest sense, see p. 189) are of course the most fertile soil for distortions of this kind. Amusing examples are the transformation of *pipe de Kummer* (Kummer being the manufacturer) into *pipe d'écume de mer* (whence *Meerschaum* in German) ; the Italian *pomi dei Mori* (*mala Æthiopica*—apples of the Moors) into *pommes d'amour* (whence love-

apples, and the German Liebesäpfel); the English game *Aunt Sally* into the French *l'âne salé*; or the Italian *girasole* (turnsol or *Helianthus tuberosus*) into the English *Jerusalem* artichoke, or, lastly, of the name Hymettus (Ὑμηττός) into *Il Matto* ("the Madman," in the Venetian dialect of the Middle Ages), whence the modern *Trello-Vouno* (the Mountain of the Madman) in Romaïc! These are but some of the more striking examples of the way in which the mind groups words together. The fact that this process of association goes on unconsciously does not make it of less effect.

If we were to follow the results of such word transformations, we should get beyond linguistics and find ourselves in the domain of folk-lore. Many a legend has been born of such accidents of language as those mentioned above.[1] In the neighbourhood of Grenoble the *tour Saint-Vrain*, which has become the *tour Sans-Venin*, has developed a legend for which popular etymology alone is responsible. The name, serving as the vehicle of thought, sets up the interplay of consonance and assimilation and approximations that are beyond all reason. Sane judgment condemns them, but they are taken to be the product of infantile imagination, which at once lends them an air of reality. It has been contended and proved up to a point that mythology is nothing but an ailment of language.[2] Hagiography likewise: a fair number of the healing saints of the country-side owe their virtue to the puns to which their names lend themselves. Popular medicine abounds in recipes founded upon mere word-play. Association of ideas creates homeopathic remedies because words always possess a certain *symbolic* value.[3]

We have already shown the relation between affective and logical language. The two things merge in the use that is made of speech, but it is in the matter of vocabulary that the blending is most constant. A word is not solely defined by the abstract definition to be found in the dictionary. Around the logical meaning of each word there floats an emotional atmosphere which envelops and penetrates it, and gives it some transient colouring for each of its various uses. Even for the least imaginative and impressionable of men, the abstract

[1] Max Müller, **CIV,** vol. ii, pp. 91–2, and p. 317; Nyrop, **CLXXXVI,** p. 222.
[2] Bréal, **LIV.**
[3] See Meyer, on the value of symbolic words, **XXX,** vol. xii, p. 256.

and general idea a word expresses is coloured with certain finer shades which constitute its expressive significance.

If we try to analyse it, we discover that this significance has varied characteristics and multiple origins. It is primarily the result of the accord established between the meaning of the word and the sounds which embody it. Doubtless, no one nowadays believes with President de Brosses or Court de Gébelin, that words were originally formed of sounds which echoed the ideas they expressed; that the word *fleuve* for example, owes its name to the fact that the group *fl*, which contains a "liquid", awakens the sensation of something "flowing". There is no pre-established harmony between sound and sense. Vocabulary does not arise out of a series of onomatopœic stems. No philologist would care to subscribe to the formula of the Church Father, St. Thomas Aquinas, according to which the names must be in accordance with the nature of things (*nomina debent naturis rerum congruere*). But if the hypothesis of such a harmony proves powerless to explain the formation of vocabularies, it is of value in so far as it states a certain condition of our minds.[1] It is absurd to insist that the group *fl* and the idea of flowing should necessarily be connected, since the words *ruisseau*, *rivière*, *torrent*, which express the idea of flowing quite as fully as the word *fleuve*, do not contain the sounds in question; and the word *fleur*, which has practically the same sounds, in no way suggests the idea of flowing. It is true, however, that the word *fleuve* is expressive, because the sounds of which it is composed lend themselves easily to the evocation of the image they represent.

In fact, there are differences in the capacity for expression among sounds or sound-combinations, and therein lies the secret of onomatopœia. The German word *Kladderadatsch* is very suggestive of a pile of dishes falling in pieces, and the French *patapouf* of a bag of linen bouncing on the steps of a staircase; the French *pan* suggests the sharp crack of a revolver, and *boom* (French *boum*) the prolonged echo of a big gun. Every musician knows that different tonalities lend themselves more or less to the expression of different sentiments; one key is adapted to rural simplicity, another to caressing and voluptuous sweetness, another to rude masculine

[1] Grammont, *Onomatopées et mots expressifs*, dans **XVII,** vol. xliv, p. 97.

energy. The composer's instinct makes him choose the tone which is most suitable in each case, and it is true that transposition often alters the character of a piece of music. But it would be unreasonable to contend that a composer of genius could not express the sentiment he felt in any key whatever. It is similarly part of the poet's art to give to the sounds of words all the expressive content he desires. " The word, the father of the thought, through its phonic elements produces the sonorousness of verse, and subdues the accompanying secondary words to a state of tonic vassalage " (Becq de Fouquières). By cleverly arranged sequences and contrasts the poet can produce unexpected effects with words which the uninitiated would never suspect could be put to such uses.

No matter what word we take, it conjures up some special image in our minds—gay or sad, pleasant or terrifying, great or small, admirable or ridiculous—and this independently of its sense and often before we ever know its meaning. Name someone that the hearer has never seen ; he immediately forms a certain idea of the person named—generally a false one. " Well," he will say afterwards, when he has been introduced to the unknown person," I did not picture him like that at all." The same thing happens with words. Our conception of things is dominated by spontaneous impressions arising from the names they bear.

In establishing a harmony between a thing and its name we conform to a psychic habit as old as humanity. For a very long time names were regarded not only as conventional signs, but as integral parts of things, which participated in all their properties. The sign was not distinguished from the object. The formula *nomen omen* recalls this old conception ; a trace of it is to be found in the lists of tabooed words (see p. 220) and in the distortions which result from these interdictions. The name was of very great importance in those early days. In Genesis we see what meaning was attached to the names of Abraham, Sarah, and Isaac. In Greece, the unfortunate Ajax carried within his name the symbol of his destiny (Sophocles, *Ajax*, v. 430).

The name of Ulysses was reminiscent of certain characteristics possessed by his grandfather (see *Odyssey*, Book xix, v. 406). Words were not haphazard and indifferent signs ; they possessed a magical value which accounts for the power of

incantations and curses. The written word was naturally even more efficacious than the spoken. We shall allude again to the magical power of words in the chapter on writing. But the mere word sufficed to produce powerful effects, especially when it was enshrined in a verse, where the words were fixed and governed by rhythm. Virgil says that a formula in rhyme will make the moon come down out of heaven.

Carmina uel cælo possunt deducere lunam.

(Ecl. viii, v. 69.)

The early poets were invested with a redoubtable power, summed up in the word "satire". This word evokes in our civilized minds nothing more than a literary exercise, somewhat antiquated and in any case inoffensive. But there was a time when the satirist was also a magician, when satires were veritable incantations, fatal to those at whom they were aimed. We know what result was produced by the satires of Archilochus. By the violence of his iambics this rejected lover succeeded in reducing to despair and suicide the father of the girl he loved, and, more cruel still, the young girl herself. The story has been handed down to us in the form of a legend, flattering on the whole to the talent of Archilochus, if not to his character. In reality, however, it should not be interpreted as a legend, but taken literally. Archilochus did actually condemn Lycambes and Neobule to death by launching against them a magical incantation from whose power they could not escape. It was later that, thanks to the progress of civilization, the functions of satiric poet and malignant sorcerer were differentiated. Originally they were one and the same, and for a long time continued so to be in many lands. In Gaelic "lot" or "destiny" is still rendered *ortha*, borrowed a very long time ago from the Latin *orationem*; and of a sorceress it is said *tha facal aice* (she has a word), by way of indicating her power.[1]

To know the names of things, in fact, is to hold them in one's power; the knowledge of words is therefore a mark of power. "O Fever," said the witch-doctors of the Atharva-Veda in their conjurations, "thou shalt not escape me; I know thy name!" The command to a disease to come out

[1] G. Henderson, *Survivals in belief among the Celts*, Glasgow (1911), pp. 11, 18, and 291.

of the patient is even more peremptory. To know the name of the evil is half the cure. Let us not smile at these primitive beliefs. They are still in force to-day, since we believe in the importance of the diagnosis when it is expressed in words. "I suffer a great deal with my head, doctor—it is *cephalalgia*." "My digestion is bad—it is *dyspepsia*." This Molièresque dialogue is repeated every day in all consulting rooms. One might say that the technical term has a precision lacking in the current term, that it designates a group of definite symptoms and that cephalalgia, for example, is not headache, nor dyspepsia indigestion. But, in actual fact, the doctor is content to substitute a mysterious for a usual and commonplace word that all his patients understand; they experience relief directly they learn that the specialist knows by name the occult evil that causes their sufferings.

Analogical relations that intersect all about a word, currents set up between sounds, ideas and things—these are the results of the action of the mind upon vocabulary. When a word emerges into our consciousness, therefore, it is not isolated. Even when it presents itself under one aspect alone, the others remaining in the background, it brings none the less in its train a whole crowd of notions and feelings attached to it by subtle links which are always ready to come to the surface. The words stored up in our minds participate in all our intellectual and emotional life.

It may be interesting, furthermore, to know something of the extent of a vocabulary.[1]

Certain philologists have faced this problem and have tried to solve it in figures. Max Müller, for example, claimed, on the testimony of a village clergyman, that the vocabulary of an illiterate English countryman did not exceed 300 words. To which others have opposed the vocabulary, for example, of Shakespeare, which included 15,000 words according to some, or, according to others, as many as 24,000. Milton used about 7,000 to 8,000 words. There are about 9,000 in the Homeric poems, 5,642 in the Old Testament, and 4,800 in the New.

These figures, however, do not prove much. First of all literary works should be put out of court. No doubt it is possible to establish in round numbers how many words are

[1] See Max Müller, **CIII**, p. 287 and ff.

used in the Iliad and Odyssey, or the plays of Shakespeare or Racine. But any claims to establish in this way the vocabulary of Homer, Shakespeare, or Racine is puerile. There are polished writers who deliberately limit their vocabularies, and it would therefore be just as incorrect to judge of the richness of our language by the tragedies of Racine, as to calculate the population of France by its people of quality alone. Generally, however, a writer's language is artificially augmented by a large number of words that he picks up by chance or delves from books—when, indeed, he does not invent them. Are we to count as part of Victor Hugo's vocabulary the famous *Jérimadeth*, which is a mere joke, and many other proper nouns which, though they may be real, had none the less only an accidental and ephemeral existence in the poet's brain? Setting aside proper nouns, how many common words does a writer take from the dictionary—words to which he merely has second-hand recourse! The writer's vocabulary must not be confounded with a lexicon of his writings. A lexicon is always composite; aristocratic words rub shoulders with plebeian words, and the technical terms with those in common use. In every lexicon there are several vocabularies intermingled. To the writer's natural vocabulary, which he uses in current speech, divers others are added—archaic, scientific, dialectic, and vernacular—which enrich his style and often constitute its entire worth.

No one knows the extent of his own vocabulary, and there is no way of estimating it. It is not enough to take the words of a dictionary, one by one, in order to ascertain what ideas they awaken, if indeed they awaken any. For that would be to place oneself in totally artificial conditions. Words are not arranged in the mind as in the columns of a book. Their succession cannot be taken in at a glance and reviewed like soldiers lined up on parade. We do not know exactly from what depth our intellectual activity draws them, to put them in their places in our sentences and slip them, fully equipped, into our speech organs. The word is never isolated in the mind. It forms part of a more or less extensive group from which it borrows its force. But, for the distribution of the groups there are reasons both grammatical and psychological, historical and social, rendering vain any attempt to estimate vocabulary numerically.

Even from a grammatical point of view, enumeration is impossible. We have shown how difficult it is to define a word and, often, to separate it into its component parts. It is evident that in any enumeration of vocabulary the morphemes must be set aside. But there are many words which are simply morphemes, and morphemes which are still sometimes words. The negation, for example, has more value than a simple suffix indicating a class or grammatical use; by treating it as a morpheme we unduly reduce its value. And yet there are many languages in which negation is not expressed by an isolated and independent word. As, for instance, when the Irish *domelin* (I eat) is contrasted with *nitoimlin* (I do not eat), or the Lithuanian *neszù* (I carry) with *nèneszu* (I do not carry), there is in both cases only one word to consider, but it is a word which embraces a negative morpheme.

Thanks to the existence of suffix categories the number of words is never limited in the grammatical sense. In French, where the suffix *-eur* is still an active one, *promeneur* has been derived from *promener*, *marcheur* from *marcher*, *trotteur* from *trotter*. It may be that there is no such word as *galopeur*, but what does that matter? If I have occasion to use it, the hearer will immediately understand me since the elements forming this word are perfectly familiar to him. Even if the word is not to be found in the dictionary, it must be accounted as a French word, since it virtually exists in the minds of all Frenchmen. There are plenty of words like this, not actually present in my consciousness, as I have never used them and possibly never shall, but which, none the less, form part of my vocabulary, since they would come quite naturally into my mind if I had need of them, and because I should understand them immediately if they were used in my presence. French, however, is a less convincing example than certain other languages, like Lithuanian, where the abstract substantives and agentival nouns are formed at will from verbal themes like futures or subjunctives. From this point of view—the grammatical one—the vocabulary is unlimited.

Nor is it any the less so from the strictly semantic aspect of the use of words. We have seen above that a word generally has as many meanings as uses. But each meaning is independent of the others, since the word when actually used by the speaker has but one meaning in his mind. It can therefore be

maintained that a vocabulary contains as many different words as there are uses for each word ; and, as the number of uses for each word is unlimited—since use can create a fresh manner of employing it every day—it has to be conceded that a vocabulary can increase *ad infinitum* so long as the language is a living one. The same word would have to be counted many times over, and it would be impossible to say how many times.

From another point of view, however, many words ought not to figure at all in a vocabulary.

There is a hierarchy of words which makes it possible for a verb to be distinguished from an adjective or a substantive, and a common from a proper noun (see p. 135). Psychologically, this hierarchy is justified. But it creates perceptible differences between words. What does a proper noun represent ? As a rule, nothing. How many people, even among the most cultivated, have a precise and exact idea of a Pericles or an Augustus, a Louis XIV or a Frederick II ? We call those people scholars who store up in their heads a series of proper nouns which they are capable of reeling off on request, to the admiration of ignorant persons and fools. But how many even of these names awaken any clear ideas in their minds ? More often than not they are so much dead weight with which they load their memory. We cannot legitimately include in a vocabulary what is merely an exercise of memory.

Many of the so-called common nouns are at bottom nothing but proper nouns.[1] I know that a starling, a linnet, a merlin, or a goshawk are birds, because I have happened to meet these words in tales of country life, or simply when turning over the leaves of a treatise on natural history. But I cannot picture these birds for myself. Their names evoke no precise image in my mind. They are birds ; I can say no more of them. This is already saying a good deal. There are so many names which I should hesitate to place among mammals, reptiles, or fishes, vegetables or minerals ; and last of all I come to certain words lurking in the corners of my memory which I find there by chance, and about which I can say absolutely nothing except perhaps that they are French.

[1] Vendryes, " Sur quelque difficultés de l'étymologie des noms propres," in *Mélanges littéraires publiés par la Faculté des lettres de Clermont-Ferrand*, 1910, pp. 329–37.

If we thus pursue our examination of a vocabulary, analysing one by one the words it comprises, and picking and choosing between them, it would soon appear that the stock carried by an educated and cultured man includes a considerable number of useless words which only cumber his brain. But there is an imperceptible transition from well-known words which serve for everyday use to those which have been introduced into the memory accidentally, and are never used at all. If a certain percentage must be sacrificed in estimating the size of a vocabulary, where is the limit to be drawn ?

Must the extra weight due to a knowledge of foreign tongues be taken into account as well ? A polyglot is a man capable of expressing the same idea in several languages. An interpreter in a cosmopolitan hotel knows the names of ordinary objects in three, four, or five different forms. This is an exercise in memory which his profession imposes upon him. Should we say that his vocabulary is three, four, or five times richer than that of the waiter who, having traffic with but a single *clientèle*, knows but a single language ? It is so, no doubt, if we only consider the hard, dry fact that his memory bears the heavier burden. In reality, however, it is not a question of a richer vocabulary, but of several different vocabularies supporting, and being superposed on, each other—usually without admixture—the use of which is determined by circumstance.

There is a vocabulary for the common needs of life which is practically everywhere the same so far as the number of words it contains goes. An illiterate peasant, it is said, requires three hundred words as his life-equipment. Let us admit this figure as it stands, although it is certainly too low. Nevertheless, a highly educated man of rank uses very few more words in everyday speech. They are not the same as those used by the masses, that is the only difference. The man of noble birth and breeding, however, may likewise understand the popular words, and know how to use them on occasion. Hence, he has two vocabularies—one for the drawing-room, and the other for the farm.[1] If he is a soldier he will also know the language of the camp, and if he is interested in a certain science he will be initiated into a more or less extensive technical vocabulary.

[1] "A courtier who could speak the vernacular would seem to me to have almost as much merits as a scholar versed in foreign tongues" (Duclos, *Considérations sur les mœurs*, 5th ed., Paris (1767), p. 212).

Lastly, we will suppose that he has a practical knowledge of one or more foreign tongues. These are so many additional vocabularies which he carries in his head. They are different vocabularies because they result from different needs and serve as current coin between different sets of people.

When we submit a vocabulary to close examination the most startling thing we discover is the extreme complexity of the load of words that can be carried in the head. There is not always a common measure for the different elements of which it is composed, either from the grammatical or the psychological point of view ; nor, what is even more important, from the point of view of the use which is made of it. It is this complexity which renders vocabulary interesting. We shall return to the subject when we come to the study of the formation of a language. In the meanwhile, it will serve to explain the transformations to which every vocabulary is subject.

CHAPTER II

How the Meaning of Words is Modified [1]

IN the evolution of language there is a difference between phonetics, morphology, and vocabulary.

The phonetic system becomes stabilized at a very early age, and remains unchanged thenceforward. Apart from conscious variations resulting from education, when the acquisition of a foreign or strange pronunciation is destructive of the one he learned from his mother, a man maintains right to the end of his life the system of articulation fixed during his childhood. The morphological system is equally stable. Doubtless it takes a little longer to establish, but once established it suffers no appreciable change. Changes in morphology do not take place in the course of a generation, but, like changes in phonetics, they occur during the transition from one generation to another. The articulatory and grammatical systems are acquired once for all, and owe their stability to the fact that they depend on the identity of the speaker's mind.

On the other hand, vocabulary is never fixed because it depends upon circumstances. Each speaker continues to build up his vocabulary from the beginning of his life to its end, by a series of borrowings from his surroundings. Not only does he increase his vocabulary but diminishes and transforms it. It is a perpetual going and coming of words, some newly arriving and others departing. But the newcomers do not always drive the old ones away ; the mind accommodates itself to the existence of synonyms and doublets, and generally assigns different uses to them. Thus, in French, *chaire* and *chaise* or *sieur* and *seigneur* have not identical meanings. Life favours transformations in vocabularies, for it multiplies the causes which act upon words. Social relations, callings, and different technical equipment, all conspire to effect changes in vocabulary, banishing old words or modifying their meaning,

[1] Cf. in general : Bréal, **LV** ; Nyrop, **CV**, vol. iv, and **CLXXXVI** ; Jaberg, **XXXVIII**, vol. xxv, p. 561 and ff. (bibliography and history of the question). Special works : E. Littré, *Comment les mots changent de sens* (with a preface and notes by Michel Bréal), Paris (1888) ; A. Meillet, "Comment les mots changent de sens" (**II**, 1905–6, pp. 1–38) ; Paul, **CLXXXVIII**, chap. iv ; Persson, **CXC**, t. ii, p. 968 ff.

and calling for the creation of new ones. The mind is ceaselessly invited to work upon vocabulary. In short, there is no field in which the causes for the transformation of phenomena are more complex, numerous or varied.

When we speak of transformations in vocabulary, we immediately think of the *life of words* and of the little book by Arsène Darmesteter which bears this title, *La Vie des mots*.[1] The title, however, is by no means the best part of the book. The very phrase " life of words " is equivocal and has lent itself frequently to interpretations against which Darmesteter himself would certainly have protested.

A word cannot be considered as a living entity. The analogy is only apparent. Words are neither born nor do they die in the manner of men. In exceptional cases it may happen that we are in a position to determine the exact year in which a given word, hitherto unknown, came into general use ; thus, the appearance of the word *chandail* [2] dates from 1894 ; the creation of the word *pudeur* takes us back to the poet Desportes,[3] and that of the word *bienfaisance* to the Abbé de Saint-Pierre.[4] The word *obscénité*, the creation of the " précieuses " of the early seventeenth century, was a neologism to Molière's contemporaries.[5]

More recently the word *rescapé* was introduced into French, following upon the catastrophe of Courrières (in 1906), and the word *indésirable*, from a certain case of elopement whose hero was refused entrance into the United States. The first of these two cases, however, was merely the extension into common French of a word used in the department of the Pas-de-Calais, and the second was borrowed from English. These two words have certainly been " introduced " into French, but under conditions which cannot be compared in any way to birth.

French has substituted the word *tête* for the former *chef*, from Latin *caput*, and the word *jument* for the older *ive* derived from *equa*. Let us suppose that by some very dubious chance

[1] **LXII**, *passim*.
[2] L. Clédat, **LIX**, 4th edition, p. 117.
[3] Vaugelas, *Remarques sur la langue française*, No. 527, edition of 1738, vol. iii, p. 348. It should be remembered that the word *pudeur* is used by Montaigne (*Essais*, vol. ii, p. 15 ; vol. iii, p. 5).
[4] Voltaire, *Septième discours sur l'homme*.
[5] *Critique de l'École des Femmes*, scene 3.

the word *chef* were to come back into use in the sense of *tête*, or that the word *ive* were to replace its more fortunate competitor *jument*. Could this be explained as the return to life of a moribund word (*chef*) or the renascence of a dead one (*ive*)? By no manner of means. It would simply be the introduction of two new words into the vocabulary. No connexion could be established between the old word *ive* of the Middle Ages and a new word *ive*, created in our day by fantasy or to fill some requirement.

Sometimes a word which has gone abroad and been lost to us may come back hundreds of years after. For example, *flirt* and *budget* are to-day borrowings from the English; but we know that they were originally French words which crossed the channel at an early date. And yet it would be inaccurate to take seriously a metaphor which compares words to travellers passing and repassing frontiers. It is no longer an old French word *fleurette* that comes back to France, but an English word *flirt* that is introduced into our modern language. Nor is it the old French word *bogète* (little bag) that French people have taken back under the form "budget"; it is a different word, a foreign word, signifying something quite other.

Nevertheless, the science of etymology, which tracks words across the centuries, and follows them into other lands, is extremely useful. Words, we know, have no independent existence; they exist only in men's minds. But the never-ceasing activity of the mind is reflected in vocabulary. We must blame that error which takes the image in the mirror for the living person; in actual fact, the image has no life. None the less, the looking-glass accurately reflects the gestures made in front of it. It is legitimate to estimate or interpret the image on the same grounds as the person reflected. This very simple reasoning will suffice to justify the value of the results that are obtainable from etymology.

But there is a condition to be observed—namely, that etymology shall not consider its task accomplished when by sheer patience it has succeeded in unravelling the history of certain words taken by themselves. The etymology of isolated words is of no interest in itself; a particular fact, even if scientifically established, is merely child's play if we cannot deduce from it a general principle applicable to other facts. Now there are many etymologies which do not admit of general

conclusions. It matters very little, on the whole, that *échalote* comes from the city of Ascalon, the word *hussard* from the number " twenty " in Hungarian, or that *Lyon* signifies " the city of the god Lugh ". These facts may concern the historian studying the cultivation of vegetables, military institutions, or Celtic mythology ; it does not concern the philologist. He merely uses etymology in order to collect the greatest possible number of similar semantic processes and to extract from this study certain general laws according to which the meanings of words evolve.

These laws are not inherent in the words themselves. The defect of Darmesteter's book is that it inculcates a belief in a sort of internal logic which governs the semantic transformations of words. Apparently its author did not look further than the scholastic abstractions of catachresis or metonymy ; he did not get so far as the concrete realities which the word represents.

Words are not arranged in the mind as isolated entities. The tendency of the mind to group them involves variations such as those of popular etymology, which affect the form of the word (see p. 212). The influence of this grouping bears more strongly still on the meaning of words.

The bonds of the semantic family hold each word in its traditional sense ; or if by some mischance there is a displacement of meaning in one of the essential words of the family, this member draws the others along with it in the direction of the new meaning. Thus, the French word *habit* (state, manner of being) having acquired the special meaning of " clothes ", the verb *habiller* (to put into condition) has undergone the same specialization ; and these words have dragged with them their derivatives and compounds *habilleur, habillement, déshabiller*, etc. The words *pondre* and *ponte* have both, at the same time, passed from the general idea " to lay ", to that of " to lay eggs " with reference to a female bird. Linguistic family feeling has held these words together.

When the bonds become relaxed or broken, there is nothing to prevent the meaning from wandering. The Latin *captiuus* preserved the meaning "captive" throughout the history of the Latin language because the verb *capio* " I take " went alongside of it. In French, *capio* did not persist, while the derivative

captiuus was retained, but only as an isolated word, and, being no longer sustained by its theme nor attached to any definite morphological type, this derivative underwent rapid changes. It became *chétif* " miserable, weak ". This displacement of meaning, favoured by the dislocation of the group to which the word originally belonged, is also partly due to the influence of the word *petit* (which in certain dialects has given rise even to a feminine *chétite*). After being uprooted, the word *chétif* has been, somehow, transplanted elsewhere and associated with another semantic group.

The importance of morphological grouping is just as great. We have seen (p. 140) how the suffix sometimes spreads its own influence over the word so thoroughly that the word-sense is changed in conformity with that of other words having the same suffix. The morphological bond uniting two words often prevents them from acquiring a new meaning ; *meurtrier* has remained attached to *meurtre* (like *ouvrier* to *œuvre* or *vitrier* to *vitre*) and has not followed the verb *meurtrir* (from which *meurtrissure* was derived) in its altered meaning. But when the morphological bond uniting the derivative to the theme becomes weakened a change in meaning is frequent. Thus, the Latin *toga* has no etymological meaning other than " that which covers, a covering " ; it is the abstract substantive of the verb *tego*, as in Greek τροφή " nourishment ", that of τρέφω " I nourish ", νομή " pasture " from νέμω " I put to pasture ", στοργή " tenderness " from στέργω " I cherish ", etc. But this formation is as rare in Latin as it is frequent in Greek. The bond uniting τροφή to τρέφω is stronger than that uniting *toga* to *tego*. Hence there was nothing to prevent the word *toga* from being stabilized in a special sense—in which it designated a certain garment.

In Old High German, several adjectives formed with the suffix *-i-* had side by side with them adverbs bearing the suffix *-o-* ; e.g., *festi* " firm " and *fasto* ; *skôni* " beautiful " and *skôno*. This double formation disappeared in the course of time, and the adverb was formed directly from the adjective. Thus it happened that after the loss of the finals, German inherited two pairs of different words, *fest* and *schön* (adjectives), *fast* and *schon* (adverbs), in which the respective bonds were no longer felt. This favoured a development in the meaning of the adverbs : *fast* assumed the meaning " almost ", *schon*

that of "already" (cf. the French *à la belle heure, de bonne heure*); and for "firmly" and "beautifully" modern German has *fest* and *schön*.

These examples show to what influences words are subjected by members of the family to which they belong. The brain, working unconsciously, limits the words to special meanings and prepares them in the rough for the various uses to which they are destined. In actual use, words are exposed to still further risks of change in meaning, this time by their context.

Although at the moment each word is used it is completely invested with a momentary value excluding the sense in which it may otherwise be used, the very fact that words have such a variety of senses causes their use to exert a continual effect upon their signification. This is manifested in two ways. On the one hand, the constant use of the same word in the same context may prove misleading to the mind, which, having no means of determining by comparison the precise value of the word, is therefore prone to modify it; and, on the other hand, the frequent use of the same word in different contexts exposes it to the risk of being worn bare of or changing its meaning.

When we hear or read a sentence the words it contains mutually explain each other. If one of their number is not very familiar to us—and there is always a moment in our lives when we hear a word for the first time—we naturally seek to interpret it by the context. This is the process employed by schoolboys when they are trying to translate a foreign text, Latin or German, for instance. The idea which we thus obtain by guesswork may chance to be wrong, but it is generally rectified by the fact that the same word will reappear later on in other sentences, explained by other words. In this way, the meaning of every word becomes fixed in one's mind.

There are certain words with a restricted use which never appear except in the company of certain others. For such as these the chances of error are greater, since use does not supply a means of discovering their precise value. Therefore, it frequently happens that the false meaning attached to it removes the word far from its original significance. The adjective *fruste* originally meant a coin whose stamped effigy was effaced; *monnaie fruste* was understood to designate a coin rudely struck, without art or finish. By extension the word is now used to indicate a coarse, rough man, who is lacking

in culture.[1] The incorrect meaning has prevailed, favoured perhaps by a vague resemblance in sound to the words *rustre* " clownish " and *rustaud* " boorish ".

The mind, indeed, uses every method at its disposal in order to determine the precise meanings of words. But it is apt to make mistakes when peculiar circumstances deflect it in the wrong direction. The French adjective *émérite*, for instance, was first used with reference to a retired official. By a pedantic imitation of the Latin, the term *professeur émérite* was applied where to-day a French speaker would use *professeur honoraire*. But the word was interpreted as containing an expression of *merit*, or eminent dignity. Hence in France they now say that a professor is *émérite* when they wish to explain that he is distinguished. It is an inversion of meaning, but it has become so well established that French people do not hesitate to speak of a *cavalier émérite* or an *aviateur émérite*. Now that this word has enlarged its scope in French, and is used in many different contexts, it has a better chance of keeping intact this new meaning which it has acquired through a mistake.

Yet it can also be easily proved that the more frequently a word is used in different contexts the more likely it is to be modified in meaning. The mind is actually being swung each time in a new direction, with the result that this continual process suggests the creation of new meanings. Hence we get what is known as *polysemeia*.

By this term we are to understand the faculty words possess of assuming different meanings corresponding to their different uses and of maintaining themselves in the language with these various meanings. We have a good example of polysemeia in the word *bureau*, which at first denoted a kind of drugget, then a piece of furniture covered with this material, and then in turn any piece of furniture used for writing purposes, the room containing this piece of furniture, the occupations carried on in this room, the persons engaged in these occupations, and, finally, even the group of persons directing an organization or society. The creation of the new meaning did not necessarily destroy the old ones. Apart from the initial meaning (a kind

[1] In a recent book published by an Academician the following sentence appears summing up the portrait of one of the heroes of the war: *L'ensemble est solide, dominateur et fruste.*

of material), all the others remain in full force in the French language. The direction of semantic changes is not usually rectilinear ; they move in all directions around the principal meaning, and each of the secondary meanings can in its turn become a new centre for semantic radiation.[1]

Numerous as are the different uses to which a word may be turned, there is always one which preponderates and roughly determines the correct meaning of the word as it is put on record in the dictionary. If by chance there are two or three outstanding and irreducible meanings, we ought to consider that there are really two different words, as in the cases quoted on p. 177. But this outstanding significance can never be warranted to last ; it is surrounded by secondary meanings, always ready to come to the front and take its place. Like a branch which attracts the sap and exhausts the main trunk, the new meaning grows slowly and surely and is finally substituted for the old. The word has acquired a different meaning.

To illustrate how there is always one meaning among the different significations of the same word which is ready to impress itself upon the mind in preference to others, the following fact is worthy of remark : a substantive may have various relations with the action of a verb, but when a verb is derived from a substantive usually but one of these relations is expressed. Thus mind unconsciously chooses and retains, from among all the possible actions, only that one which it needs to express at a given moment. It is enough for there to be no obstacle from any other source for the word thus formed to enter the vocabulary and survive. For example, in German, the word *herzen* which means " to press to one's heart " is derived from *Herz*, as the Irish *bruinnim* " I clasp to my bosom " is derived from *bruinne* " bosom ". But *Kopf* gives *köpfen* which means " to decapitate " ; and Welsh *cefn* " back " gives *cefnu* " to turn one's back " ; from Irish *dorn* " fist ", we get *durnim* " I strike with my fist " ; Greek σάρξ " flesh " gives σαρκιζειν " to strip off the flesh ". To *coiffer* a person is to " coif " them ; *fesser*, *gifler*, is to hit on the *fesses* or buttocks, or on the *gifle*, an old word for *joue*, cheek ; *plumer une volaille* means to pluck the *plumes* or feathers ; *boucher* is to shut one's *bouche* or mouth ; *échiner* is to break the

[1] Darmesteter, **LXII**, p. 74.

back—*échine* or spine; *peler* is to *peel* a fruit skin or, in the neuter, to lose one's skin; and in popular language *zyeuter* (which is derived from *les yeux*, the eyes) means "to stare"; from *pilus* "hair", Latin derived two verbs *pilare*, one in the archaic period (Afranius, Novius), which means "to be covered with hair", the other in the imperial period, which means "to depilate, to pull out the hair" (Martial). There is no rule governing the meaning of the forms, which are of different periods and do not belong to the same surroundings; or, rather, the only rule is to express by the verb the particular action which would appear to be most characteristic at the time when the meaning is fixed.[1]

Here we meet with something which may be compared with the strong and weak forms of morphology. There is a sort of semantic hierarchy among words comprising strong and weak meanings. The first, which are not necessarily the oldest, impress themselves upon the mind from the moment the word appears; they owe their power to the importance of their use. The others, which have a rarer or more special use, linger in the background; they must rely upon the aid of other words to explain and give them prominence. But this hierarchy of meanings is not absolute or stable; it is subjected to all the caprices of use which engender polysemeia.

The divers changes in meaning which words have undergone, are sometimes classed under three principal types; restriction, extension, displacement. *Restriction* takes place when the meaning passes from the general to the particular (e.g. *pondre*, *sevrer* or *traire*); *extension* conversely, when it passes from the particular to the general (e.g. *arracher*, *gagner*, or *triompher*); *displacement*, when the two meanings are equivalent or indifferent from the point of view of extent (e.g. *chercher*, *choisir*, *mettre*); and when we can pass from the one to the other (as, for example, when the word is extended from the container to the content, from the cause to the effect, from the sign to the thing signified, etc., or the reverse). Naturally extension and restriction are most commonly brought about by displacement; and the displacement of meanings takes various forms to which grammars give technical names (metaphor, synecdoche, metonomy, catachresis, etc.). Examples of these

[1] See, with reference to these facts, T. Hudson Williams, **XXI**, vol. xxvi, p. 122; Nöldeke, **XXIX**, vol. iii, p. 279.

are to be found in every manual [1]; we need not therefore enter into a detailed examination of them here.

It is perhaps more interesting to note how these three types of changes are explained in actual use by the very conditions of life.

Restriction occurs, for instance, when a general name is applied to a particular group which represents the species in the eyes of the speaker. When a person is sure of being understood, he can dispense with the use of the exact and precise term and be satisfied with a general approximation. For example, when a French farm-girl is told to bring in " les bêtes " she has no difficulty in understanding that the word refers to the cows in the meadows, for to her they are the only animals that matter. Naturally, when the shepherd or the coachman speaks of his " bêtes " they are respectively referring to sheep and horses. Such a specialization often leaves traces in the language: ὄρνις, the name of a bird in ancient Greek, acquired the meaning of " hen " after the Christian Epoch (we already find ὄρνις " hen " in the Gospel of St. Luke, xiii, 34), and to-day, in modern Greek, the hen is called ὄρνιθα. Similarly, the general term bird *auca* has become in French *oie* " goose ".[2] Specialization is sometimes simply the result of an ellipsis; as when πηρός " deprived of " is used in modern Greek to designate a blind man. The deprivation of sight is felt to be the most terrible there is, and it is not therefore considered necessary to indicate it more concisely. In the Romance tongues, likewise, the Latin adjective *orbus* has acquired the meaning of " blind man ". Here, however, the desire for euphemism may be a factor (see p. 219). The general term is made to suffice in order to avoid the special word which is felt to be too blunt.

In common use, general terms are scarcely ever employed with their general significance—except perhaps by philosophers. Each speaker refers them to a particular kind of activity. We have already pointed out the varied meanings of the word *operation*.[3] According to whether we are speaking of surgery or finance, military art, forestry, or mathematics we know that this word implies cutting some part of the body,

[1] And particularly in Darmesteter, **LXIII**, and in Bréal, **LV**. Cf. also L. Clédat, *Revue de philologie française et provençale*, vol. ix (1895), p. 49.
[2] Niedermann, **XXX** (Anzeiger), vol. xviii, p. 75.
[3] Bréal, **LV**, p. 285.

handling some financial business on the exchange, directing the movements of an army, marking the trees destined for felling, or solving a problem. And when theologians speak of the operation of the Holy Spirit, they use it in still another sense. The word " season " also belongs to the class of words which admit of the most varied applications ; for the director of a casino, the proprietor of a villa, a market-gardener, a vine-grower, or a dressmaker—indeed for practically every man or woman in business or industry—there is a certain " season " referring to the time when the work is greatest, and which varies according to the kind of activity and the place in which it is carried on. In parts of Pembrokeshire in Wales, the " season " is the period of the year when stallions are at stud : this in itself is enough to indicate that in these parts horse-breeding is carried on, and everyone is interested in the covering period. The word " season ", therefore, indicates something special to each speaker, just as we saw that the word " operation " is referred by each of the supposed speakers to something familiar to himself. It would be possible to find analogous examples for all general terms and for almost every word in a language, for no matter how exact and individual the meaning of a word may be, it is always possible to restrict its extension and, as we say, to specialize it.

The process of generalization, which consists in the application of the name of a particular species to a genus in general, is less frequent, although equally well attested. This is what happens when children call all rivers by the name of the one that flows through the town where they live, such as, for instance, the Parisian child, who cries out when he sees a river, " I see a Seine." This is only a child's error, with no lasting consequences. But other similar errors have persisted. Thus, in Southern Slavonic, the name rose has been extended to flowers in general,[1] Slovenian *roža*, Crotian *rožica*. This particular case has spread its influence so far that in the border German dialects, the word *Blume* is completely lacking, and has been replaced by the word *Rose* : they say *Die Wiese ist voll Rosen* for " the meadow is full of flowers ". By contamination, in the Italian dialects of Friuli, the name *rose* is given to any flower whatsoever, and the rose itself has had to be given a new name—*rosar* or *garoful di spine*. This fact,

[1] Schuchardt, **CCII**, cf. Murko, **XXXIII**, vol. ii, p. 147.

which is interesting in connexion with the extension of vocabulary, proves that there are certain semantic categories within which the relation of genus to species is freely confused.

It is in such groups that the displacement of meaning by contact is particularly frequent. Each word has an acceptation of its own and designates a special object ; but to the mind they have something in common, in that they belong to a general group, and the general idea happens to dominate the particular meaning, the mind passing unconsciously from one of these meanings to another. This phenomenon is common, particularly in connexion with the names of plants or animals, parts of the body, diseases, and colours.

In the names of colours, the variations in meaning which we observe in the different languages for the same word are often due to specialization (see p. 201) yet the tendency we are here studying may likewise play a part.

In plant names, too, displacement in meaning is frequent. The same word has given rise to the Latin *quercus* " oak " and to the German *forha* " pine " ; the Greek φηγός, a species of oak, is the same word as the Latin *fâgus* " beech ", and the German *Buche*. To the same source may be traced the Greek word ἐλάτη " fir ", and the German *Linde* " lime-tree ". From the same prototype, Celtic has taken the name for " oak " (Irish *dair*), and Latin the word for " larch " (*larix*). The same word *tanna* in German formerly designated both the oak and the pine. Here, again, we must take into account specialization of a different kind. It is probable, for example, that the old meaning of Germanic *tanna*, like that of the prototype common to the Irish *dair* and the Latin *larix*, was simply " tree " and, in a general way, even " wood " (Gr. δόρυ) or " forest ". Each of these words might have been used to designate an important tree, the particular choice being explained on historical or geographical grounds. But when we find that the word for beech is used to designate the oak, as in the case of the German *Heister*, which has both meanings, it is simply a matter of displacement of meaning ; the mind is unsettled and lacks precision ; hence it applies to one kind of tree the name of a neighbouring one.

The names of the parts of the body are " the classic field for displacement of meaning ".[1] A fair number of such nouns are

[1] Meringer, **XXXIII**, vol. iii, p. 46, and Zauner, *Romanische Forschungen*, vol. xiv (1903), p. 339.

scattered about vaguely in the different languages, and are easily transferred from one part or organ of the body to another; the Latin *coxa* means "hip", but its corresponding form *coss* is applied to "foot" in Irish; the intermediate form is furnished by the German *Hachse* (better than *Hechse*) "shin", and also through derivatives of the Latin (French *cuisse* "thigh", Welsh, borrowed from it, *coes*). The word has gone all the way down the lower limb! The same prototype has furnished the Latin *mentum* "chin", Welsh *mant* "jaw", and German *Mund* "mouth"; the French *bouche* "mouth" is derived from the Latin *bucca*, which means "cheek", etc.

Some of these examples may have been metaphors, or, to put it better, conscious displacements. Either as a jest or for an entirely different reason, the mind readily bestows upon one member the name of its adjoining part. In the case of names which evoke erotic ideas, it is certainly metaphor, and is explained either by a sense of modesty or by an indecent intention; thus *gorge* or *estomacs* can be used for a woman's breasts, according to whether the person is well brought up or coarse. The names of so-called "unmentionable" parts of the body, and, in a general way, words relating to acts which are supposed to be dirty are particularly subject to displacement.[1] In so far as the word is not itself applied to the part in question by a metaphor known to the speaker, which accordingly excludes the possibility of transmission to any other part of the body, we may say that in general, low words are frequently interchanged. They have something in common—the fact of being low, and that is their definition. They can be employed freely enough to designate any part of the body, provided it is "low". A very coarse analogy, for instance, or the name of some adjacent part of the body, suffices to justify the displacement. All languages offer examples of this fact, and we shall leave to the reader the task of searching for them himself.

The names of the sensory operations are also subject to substitution. Frequently the words which signify to touch, to hear, to feel, to taste, are used interchangeably. The three last can be equally well applied to mental operations, and thus the Greek term *αἰσθάνομαι* is applied to understanding, hearing, and smell. In Welsh, the verb *clybod* "to hear" is also used for "to smell", "to taste",

[1] Marstrander, **XXX**, vol. xx, p. 351.

and " to feel " ; similarly, we find *atcluiniur* means " I hear " in Irish. The result is that the Irish say *cluasdall* (literally, ear blind) for " deaf ", and that the same root has furnished the Germanic languages with the term for " deaf " (Gothic, *daubs* and *bauƀs*) (see p. 221) and for " dumb " (Gothic *dumbs*), and in Greek the term for " blind " (τυφλός), which can also mean deaf or insane (*Œdipus Rex*, 371). The passing from one meaning to another is certainly favoured by the " correspondences " the mind naturally establishes between the different sense-operations.

We may predict the coming of a general science of semantics, which, collecting all the data on changes in meaning which it can draw from every language, will permit certain principles to be based thereon, not from the logical view-point alone, as always hitherto, but also from the point of view of psychology. But, further, we must make not words but the ideas they express our point of departure.

Evidently, it is not mere accident that the idea of " time " should so often be expressed by a word meaning " journey ". We ask a day-labourer who is taking barrels down into a cellar, or wood up into a loft : " How many journeys have you made ? " instead of " How many times have you been up or down ? " In Latin *uices*, *uicissem* comes from a word meaning journey, and the word *voyage* itself, under the dialectal form *yâdze*, is used in low-Valais to translate the idea of " time ". In Gothic, likewise, *zinƀs* whose actual significance was " journey " furnished the distributive adverbs : *ainamma sinƀa* " once ", *ƀrim sinƀam* " three times " ; in Lithuanian the word " time " is understood by *atvèjà*, in Irish by *fecht*, in Welsh by *gwaith*, in Low German by *Reise*, in Scandinavian by *gang* ; words which all really signify " journey ". This is apparently to be explained as due to a development of the natural meaning, achieved independently in all these different countries.

Nevertheless, there are appellations of this kind which cannot be regarded as the outcome of an identical tendency, independently manifested in each case, simply because they appear in different languages. Thus the term for *weasel*, a small carnivorous mammal, was derived, in many languages, as in the French *belette*, from the adjective signifying

" beautiful " ; e.g. German *Schöntierle*, Danish *kjønne*, Breton *kaerell*, Galician Spanish *garridiña*, and even the Basque *andereder*, literally " the beautiful lady " (*andere* =" lady ", *eder* =" beautiful "). The probability is against the same idea having occurred at the same time to so many people speaking different languages.[1] This appears to be an example of the creation of words by imitation, or more correctly, of borrowings through translations, so frequent with languages which come in contact with each other (see p. 290).

It often happens that the word will belong to some story which shares in its own wide distribution and helps it to persist. Vocabulary is then translating a happening in folk-lore, and hence by the study of folk-lore we can discover the regular channel along which words have passed. Often, moreover, the same abstract expression will spread to neighbouring regions by a kind of transmission by copy. The English *to become* is the same as *devenir* ; the Welsh *digwyddo* " arrive " as the Latin *accidere* (*cwyddo* " to fall ", like *cadere*). These cases will be considered later in the chapter on the language contact. In principle they are quite different from those we have been examining, although it is often difficult to fix the boundary between the two. Thus, when we find the verb *tomber* (to fall) used to express the idea " to please ", both in German (*gefallen*) and in Irish (*dofuit lemm* =" it pleases me ", or literally—" it falls to me "), although there is no historical bond between the two idioms, it must be concluded that two identical metaphors have been spontaneously created in each language.

The idea of sorrow is readily associated with that of greatness, as the idea of violence with that of strength. The old German adjective *sêro* " sorrowful, painful ", still preserved to-day in the dialects of the South (Serbia, Bavaria) with the meaning " wounded, afflicted ", is only used in literary German as an expression of the superlative. We can easily see how this came about. At first, they said *sehr krank*, *sehr betrübt*, before using *sehr gross* or *sehr gut*. The adjective then being robbed of its proper value (see p. 164) remained only as a morphological expression signifying a large quantity. Yet it is a remarkable fact that the Latin *saeuus* " hard, bitter, cruel ", originally

[1] **XXXIII**, No. 1, vol. ii, p. 190.

related to the Germanic word in question, had also been employed in old Latin, with the meaning "large": *saeuam dicebant ueteres magnum*, says the grammarian Servius (*Commentary on the Aeneid*, i, 4). The connexion in meaning between *sehr* "very" and *saeuus* "large" is not to be explained historically. In both cases the same semantic development took place independently, and of this Greek offers equally good examples. Thus, the adverb δεινῶς "terribly", or αἰνῶς "cruelly" is used on occasion to express a large quantity (see p. 215).

It is also easy to pass from the idea of pity to that of tenderness. In the contemplation of misery a feeling of sympathy is always mingled. Compassion and affection have their seat in adjoining parts of the human heart. We say affectionately "*Mon pauvre petit*". The idea of poverty like that of smallness, both being synonyms of weakness, inspire at once tenderness and pity. In many languages the same words serve indifferently to indicate all these feelings, and they can pass from one to the other. In Gothic, the adjective *bleiþs* means "pitiable"; its corresponding Old High German form *blidi* only signifies "kind". The root seems to be that of the Sanskrit *mrityati* "it melts, it is dissolved", the fundamental idea being that of pity, in which the heart is soaked and softened.

But goodness cannot avoid weakness, and, as the French proverb bluntly puts it, if one is too good, one becomes foolish. In many languages the words relating to the idea of goodness, gentleness, and quietness have been used to denote stupidity. Simplicity, which is a good quality in the character, is also a mental defect. French, *simple*, and German *einfältig* refer to an imbecile. The words *bonasse*, *débonnaire* are also slightly detrimental at the present day. In the first case, the degradation in meaning was favoured by the suffix *-asse*, which is distinct pejorative. But there was no external influence in the development of meanings in the English word *silly*, the German *albern*, and the Welsh *gwirion* (in the north), which originally meant respectively "quiet, inoffensive" (cf. Old English *sælig*, German *selig*), "amicable, good" (Old High German *alawâr*), and "sincere, innocent" (still so used in South Wales); all three are to-day applied to a fool or a duffer. The French word *innocent* has also suffered the same trans-

formation, intensified, however, by religious motives. In France, irony used the expression of persons consecrated to God, thus attributing to them a certain simplicity, if not hyprocrisy of intention. The words *benêt* (simpleton), *crétin* (cf. *béni*, *chrétien*) owe their pejorative significance to this disrespectful tendency.

All such changes of meaning as we have quoted are only half psychological, since the object designated by the word had already suggested such a change by its very nature. An unfortunate person naturally provokes sympathy, just as a good man may perhaps be both weak in character and, at times, simple-minded. Violence, on the other hand, presupposes force and power, and affects us like something superior and big. It may be claimed that in passing from one idea to another the mind is only following in the wake of experience, summing up in a single word an entire series of observations. Yet the part played by the mind is sufficiently large to justify us in speaking of psychological changes. It is not enough for the observation to be provided with experience if the mind does not know how to draw the appropriate inferences. To set an ill interpretation upon the pacific inclinations of a holy man, to celebrate the cruelty of an oppressor as a fine thing, to accord sympathy to the unhappy, are not these impulses everyone more or less obeys ? When we find them expressed in language, we may say that they reveal the character of the speaker : they are the indices of ironic, servile, or compassionate characters, and may serve to differentiate men.

The deterioration which words undergo " is a concrete epitome of the contempt different social classes feel for each other, or the hatred between nations and races ; the brutal intolerance of the crowd or the fanatic's lack of respect for the opinions of others . . . Men hate, pursue, despise, abuse, deceive, or see evil in each other, and language faithfully records the traces of these continual misunderstandings ".[1] The words *brigand*, *ribaud* (ribald), *assassin*, *grivois* (obscene), which originally denoted certain armed bands, owe their present meaning to the roughness and freedom of military manners : *cuistre* (formerly *cuismier* " cook "), *goujat* (formerly " valet "), to the contempt of the master for his servant ; *bouquin* (borrowed from the Flemish *boecken* " book "), *lippe* (borrowed

[1] Nyrop, **CV**, vol. iv.

from German *Lippe* " lip "), *rosse* (from German *Ross* " horse "), *hâbleur* (from Spanish *hablar* " to speak "), to the ironic contempt reserved for anything foreign. It is interesting to note that *parlar* in Spanish (from the French *parler* " to speak ") is used only in a bad sense. The word *madame* has remained a dignified term both in English and French. In German, where it has come in through borrowing, it is common and vulgar : *Madamschen*, in Berlin, is an expression used by the lower classes.[1]

We can imagine a psychology of peoples, based upon the examination of divers semantic changes, attested in the languages they speak. This study would call for considerable subtlety of mind, but it would be worth while attempting. It is possible that no accurate conclusions could be drawn therefrom, and that in the end practically the same psychological tendencies would be discovered in all peoples—the inevitable tendencies of the human spirit ; but we could perhaps define certain limits and establish certain *nuances*. Thus, the English vocabulary would doubtless reveal a greater respect for religious things and persons consecrated to God than the French. Certain differences between the German and the French would also become evident. Both of them, in familiar use, freely apply certain animal names to persons, but the French often mingle with this use a tinge of irony, contempt, or insult. The German, being more sentimental, preferably adds a shade of affection. To a French mind the lawyer Helmer in Ibsen's play appears ridiculous when he is perpetually calling his wife a " lark " or a " squirrel ". These terms of affection shock the sense of propriety far less in Scandinavian or German.

On the other hand, the Frenchman readily attaches indecent or obscene ideas to words relating to the fair sex ; the proper names *Catin, Goton, Jeanneton*, the common nouns *garce, gogue, donzelle, fille*, have suffered from this eccentricity, and the word *demoiselle* will soon endure a similar fate.

The most violent words that anger and hate can employ admit of certain uses which have been softened and mellowed ; they may serve as kindly expressions of affection, excluding all contempt or blame. A child is a *young scamp*, a *little rogue* ; a friend is addressed as " *bon bougre* ", " *vielle canaille* ", or in

[1] Gustave Cohen, *Discours d'ouverture de la chaire de langue et littérature française à l'Université d'Amsterdam*, Paris (1912), p. 13.

English as "you old blackguard". In German likewise, *Luder* or *Schelm*, in Czech *čtverák*, which are also insults, can be used affectionately. But a French mother will hardly say of her son "my lousy little one", as a German mother will not hesitate to say *mein Lausbube*. There is something indefinable in the difference in the two expressions. Yet these usages are often a pure matter of custom and represent but a passing phase. It would be easy to recall a number of familiar idioms in German which we should look upon as vulgar and not at all witty: "das ist mir *Wurst* und egal!" for "that is a matter of complete indifference to me"; "nicht die *Bohne*!" for "not the least in the world"; "kein *Bein*!" for "nobody at all". But French expressions such as *la jambe! la barbe!* or *la ferme!* are scarcely more dignified.

Changes in meaning throw as much light upon the social conditions of peoples as upon their psychology.

The idea of without and within is expressed in most Indo-European languages by the contrast of house and field. *Dehors* (out of doors) is that which goes on outside the door: *foras*, *foris*, in Latin; θύραξε, θύρασι, θύρηφι in Greek; *durs* in Armenian; *dar* in Persian. That which is out in the fields: *immaig*, *immach* in Irish (from *mag* "field"), *ermeas* (*emeas*, *dirveas*) in Breton, *lauke*, *laukan* in Lithuanian (*laukas* "field"), *artakhs* in Armenian (*art* "field"). Greek has the contrast of θυραῖος and of οἰκεῖος to indicate that which is foreign to the family and that which is part of the household, the things which belong to the outside and those that belong to the house. This reveals a social condition in which the entire family was lodged in the same house, and where the outer door marked the boundary of the family domain.

Family relations also explain the metaphorical use of terms of relationship found in many languages. Thus the application of the Latin word *nepos* to a spendthrift, and the German word *Schwager* to a postilion, is easily explained as resulting from a pleasantry. In German the word for "uncle" *Onkel* is readily applied to any amiable and obliging old man, and that for "Aunt" to a cross and fault-finding woman (*die Tante Voss*). These metaphors simply reveal a mildly malicious wit, which is but a form of popular good sense. On the contrary when the word meaning nephew also indicates rival, as in Sanskrit (*bhrâtrivyas*), this use reveals a family organization

where the relations of uncle and nephew are very different from those current in modern society.

Among pastoral peoples wealth naturally consists in flocks and herds, and wealth is counted by so many head of cattle. Thus the cattle become a kind of legal tender. This happened among the Indo-Europeans, and Indo-European languages have preserved many traces of this primitive state, in which cattle, a man's only wealth, were used as money. Homer speaks of girls ἀλφεσίβοιαι, who " bring oxen " to their fathers, meaning that they are very much sought after, and would be dearly paid for by their suitors. Irish law ordinarily fixed penalties and prices by head of cattle ; a female slave (*cumal*) was worth three cows, and the word *cumal* became a kind of money token.[1] In the Welsh laws of the tenth century the commercial value of any object was estimated in this way. In the Mabinogion Welsh tales of the Middle Ages, we read that a certain dress-ornament was worth three hundred cows. But we have a still better example. In many languages, the same word dignifies both money and cattle. When a choice finally had to be made between the two meanings, it was generally too late in the history of the language for us to be easily able to retrace the connecting thread and explain the distribution. The Latin *pecunia*, for instance, is merely derived from *pecus*. In German, the word *Vieh* now applies only to cattle, but the corresponding English *fee* refers to a certain kind of earned wage. Here the word can be traced to the name for cattle. The reverse is also found : κτῆνος, which signifies " property " in Old Greek, is used by Herodotus himself for a herd of cattle, and in the Gospel of St. Luke it denotes a beast of burden ; its parent form κτῆμα, which in classical antiquity means scarcely more than " possession " (except perhaps in Sophocles, *Antigone*, 782), is used in Crete to-day in the sense of " cattle ". The Anglo-Saxon *céap*, which means " commerce " and " buying-price " (related to the German *kaufen*), also refers to " cattle ". In Slavonic, the word *skotu* (probably borrowed from the Germanic-Gothic *skatts* " money ") signifies, from the time of the oldest texts, both " cattle " and " riches ".

Here we see the evolution of vocabulary influenced by factors which we have hitherto encountered only on rare occasions, namely social factors. They will stand out more clearly still in the following chapter.

[1] A horse is sold for a *cumal* of money in the documents relating to St. Patrick (*Codex Ardmachannus*, f°. 17 ba).

CHAPTER III

How the Terms that express Ideas are Changed

NUMEROUS works have been published which show how words change their meanings. But the problem can be stated in converse form. We must also study the way in which the meanings change their words, or, to put it better, how ideas change their names.

When we compare two widely separated periods in the history of a vocabulary, we are struck by the difference in the fate of different words. For example, let us contrast the French vocabulary with the Latin, or the Latin with the Indo-European. We find that certain words recur with unfailing regularity to designate the same object and undergo no transformations except those which phonetic evolution involves; other names for things, on the other hand, have been renewed several times. The French have substituted for the old word *chef*, a derivative of the Latin *caput*, a new word *tête* from *testa* which, in its turn, is often replaced in popular speech by successive variations: *caboche*, *fiole*, *bobine*, etc. Modern Greek has revised the old vocabulary in connexion with the ideas which are most common and apparently least subject to change: it has ψωμί for ἄρτος "bread", κρασί for οἶνος "wine", νερό for ὕδωρ "water", σπίτι for οἰκία "house", μάτι for ὀφθαλμός "eye", πουλί for ὄρνις "bird", etc.

In studying the vocabulary of all the languages whose history is known, we can easily amass facts of this kind, for all vocabularies have been more or less subject to revision. The causes for this revision are complex and sometimes elude all investigation. Since the data in connexion with vocabularies are peculiar in each case to the particular word, they depend upon accidental contingencies as impossible to foresee as to reconstruct when history does not record the facts of the case. However, there are general causes for the revision of vocabulary which explain most of the facts. They can be considered both under the individual aspect when the cause is resident in the psychology of the speaker, and under the social

aspect when it is resident in the customs connected with the language which arise from environment.

Words are generally relinquished by a speaker when they no longer completely express the meaning formerly attached to them owing to their having been weak and threadbare from use. This wear-and-tear may itself be due to phonetic or to semantic causes.

Very short words often lack expression, and when phonetic changes tend to abridge words, these are especially prone to disappear. Neither in French nor in any of the other Romance tongues is there at present any survival of the Latin word *os* " mouth ". In French we have substituted for the old word *ive* (from *equa*) the word *jument* " mare ", which has more "body". We know that in order to preserve a number of words Vulgar Latin had to lengthen them by means of suffixes : *apis*, *auris*, *sol*, have become *apicula*, *auricula*, *soliculus*, from which French has derived *abeille*, *oreille*, *soleil*. Here the suffix, as has been pointed out, has no trace of a diminutive value. On the contrary, it was destined to give body to the words, and to supply the substance they lack. It is for lack of this process of linguistic grafting that a number of words have died which custom has rejected ; for example, the word *ains*, whose loss La Bruyère seemed to regret. The reason for the abandonment of this word certainly lay in its form, for a monosyllable having an initial sound consisting solely of a nasal vowel was doomed to perish.

There is also a tendency to reject a word which, in consequence of phonetic changes, has become too much like another. A homonym involves confusion, and we remedy its defects by dropping one homonym and introducing a new word. The phonetic representative of the Latin *serrare* " to saw " still persists to-day in several parts of the French-speaking area ; [1] but its former area of usage was very wide, coherent, and homogeneous. It has been supplanted in many places by words of later origin, generally derivatives of the Latin prototypes *secare*, *resecare*, or *sectare*, because it had a quasi-homonymy in the verb *serare* " to shut ", which was always likely to become a complete homonym. This resulted in a certain sense of discomfort, from which the language sought to escape wherever both verbs were in use.

[1] Gilliéron, **LXXV.**

In all these cases it is phonetic accident which is responsible for the substitution of the new name. At the same time the importance of the phonetic aspect must not be exaggerated, for this alone rarely suffices to explain everything. Often there are other reasons why words are rejected besides their inconvenient form. And we can often observe reaction in language. Homonyms may be protected by the context against the danger of ambiguity ; this makes it possible to retain them without any trouble. In order to preserve and maintain the short words, language may give them the permanent support of other words. Thus the adjectives *sain* " sound ", *sauf* " safe ", hardly ever exist alone. But by uniting with each other, these two feeble units acquired resistance, and we say *sain et sauf* " safe and sound ". Place-names are not among those words that are easily lost ; when they are monosyllabic we assure their preservation by prefacing them with a common noun which serves as a prop : *Ain, Eu, Batz,* become *la rivière d'Ain, la ville d'Eu, le Bourg de Batz* ; or an element may be added to lengthen them : *Bourg* is called *Bourg-en-Bresse* (or even simply *Bourk*, articulating the *k*). All these are remedies for phonetic wear.

Semantic wear is no less serious. Frequent use wears away the meaning as well as the forms of words, and in the case of expressive words especially, the expressive value rapidly attenuates with use. The word becomes tarnished and worn. For example, if we consider the words which describe the emotions, we notice how the strongest of them gradually fall into discredit and finally pass out of use because they have lost their expressive power. This phenomenon is corroborated by the expressions relating to quantity, especially a large quantity, and consequently to anything implying excess or superabundance. The French word *beaucoup* has replaced the old word *moult* from *multum* : and this word in its turn, as we know, has many substitutes in current speech ; *un grand nombre, une foule, des quantités, des tas, des flottes*, etc., according to the objects referred to, also to the speaker's degree of education.

In all languages where the superlative is marked not by a special suffix, but by the addition of an adverb to the adjective, the adverb in question generally presents a variety of forms. Even in old Greek or Latin, both of which had a suffix

to denote the superlative, the use of the adverb was not excluded. Greek had λίαν, πολύ, ἐπιπολύ, σφοδρῶς, σφοδρῶς μάλα, μάλιστα and many others; Latin had *ualde, magis, maxime*, etc. (cf. p. 207). The French created the adverb *très*, which is only the Latin *trans* "across, through, beyond" (note the same evolution in the English *thorough, thoroughly*, and in the German *durch und durch, durchaus*). But *très* is now banal, and has lost its force. *Très* is no longer strong enough to give to a superlative its full force. We say in French that a man is an *archi-fou, ultra-réactionnaire*, utilizing the method which brought *trés* into existence; or better still, we make use of an adverb like *parfaitement, complètement, absolument, tout à fait*, etc. We know what a large number of such superlative adverbs exist in French. Indeed, it would practically be impossible to take a census of them, for everyone invents them to suit his fancy. Many, like *grandement, fameusement, extraordinairement, épatamment, étonnamment*, explain themselves. But, as the superlative force becomes stronger, the meaning of the adjective from which the adverb is derived weakens proportionately. We would almost think that the mind, having withdrawn its attention from the radical, had concentrated it instead on the suffix "-ment", which has become the essential part of the word. As a rule it is enough if the radical expresses the idea of something strong, rude, or gross, and thus *rudement, salement, bonnement, furieusement, terriblement, effroyablement*, have come to express the superlative.

This is not peculiar to French. Familiarly speaking, German will describe a woman as *furchtbar nett* "terribly nice", *furchtbar süss* "terribly sweet", and has also such expressions as *hübsch artig, hübsch gesund*, much like the English *pretty dirty*. And as in German and English there is no particular mark attached to the adverb, the value of the words *furchtbar, hübsch*, or *pretty* is entirely due to their position, to their accentuation, and to the fact that they are not separated from the adjective which follows, and with which they combine to make one impression on the brain. Here we really have the creation of a morpheme—but it is a morpheme of expression (see pp. 135, 140).

All words with any sort of expressive force are liable to become weakened in value, and thus necessitate revision. Every language has an extraordinarily large number of words

to designate something disagreeable and burdensome. The French say *ennuyant, embêtant, fatigant, crispant, esquintant, éreintant, assommant, tuant, rasant, barbant, cannulant,* etc. These words are certainly not synonyms, and they all belong to different environments, but they have been added, one after the other, to obtain greater emphasis as the one before has weakened, and each in turn, from over-use, will likewise wear so thin that still others will have to be invented to take their place.

When a thing or an idea suggests, over and above its own value, a number of secondary values, which differ according to the surroundings and circumstances, we must expect to find that the language has varying expressions for them. Thus money or coin can be expressed in many ways. The French say *galette, braise, pognon, douille, beurre, os, pèze, plâtre,* etc., while in German *Draht, Kies, Moos,* are commonly used as synonyms for *Geld*. And naturally the idea of paying is likewise expressed variously according to the circumstances. In French we find *verser, casquer, cracher, éclairer,* etc., and in German *blechen, bluten, berappen*. A similar variety of forms expressing the idea of deceiving will be found in all languages. *Noise* may be caused in many different ways, and therefore admits of a variety of expressions. The French speak of making a *potin, barouf, chahut, raffut, pétard, chambard* ; like the German *Radau, Randal, Krakehl,* etc.

It might be objected that these are examples of slang, and that slang consists in the use of a special vocabulary. But this objection has no weight. As we shall see in a later chapter, slang is the outcome of conditions natural to language. A special language is not an artificial language. The processes by which slang comes into being are quite normal ; and if the necessity of frequently renewing the vocabulary is particularly evident in slang, this is owing to the fact that slang is a spoken language in which expressiveness is always necessary (see p. 252).

Furthermore, there is no precise boundary between slang and ordinary language. How many vocabularies, even the finest and most literary, have not borrowed from slang ? The word *tête* is a slang term in comparison with *caput* ; and if *tête* in its turn comes to be displaced by *fiole* or *bobine,* this will be yet another success for slang. To call the head a " pot " is

so natural that it is found in other languages also, especially in Germanic, for the German *Kopf* is related to the Latin *cupa* ; and the Scandinavian *kollr* is derived from *kolla* " pot ". Many parts of the body lend themselves to similar metaphors, though certainly not all to an equal extent. We find, for example, that the term for *foot* has remained identical in many languages, but that the word for *hand*, on the contrary, has been frequently renewed, having been replaced by terms meaning hook, claw, spoon, etc.[1] This is due to the fact that the hand is put to more varied uses than the foot, and above all to uses which themselves demand a frequent revision of expressive content. Thus the idea " to take " is expressed in every language in a number of ways.

So also is the idea *to speak*, owing to the varied emotions it awakens.[2] The verbs signifying " to speak " rapidly wear out. The French are gradually replacing *parler* by *causer*, and *parler* was itself a later intruder into Latin (*parabolare*). The old Latin verb *loqui* did not survive, and in the general meaning " to speak " *loqui* itself was already a Latin (or Italo-Celtic) innovation. The three principal modern Celtic languages have three different verbs for this idea : Irish *labhraim*, Welsh *siarad*, Breton *komps* ; English has *to speak*, German *sprechen*, Gothic *maþljan*, Lithuanian *tarti*, or *kalbéti*, Slavonic *glagolati* (Russian *molvit' govorit'*, Polish *mowic'*). All these verbs are comparatively recent in the languages where they occur, as ἀγορεύειν certainly was in the Greek of Homer. The great variety they present is explained by the semantic wear which necessitates a renewal of the vocabulary.

Sometimes this renewal is due to a feeling for contrast. There are certain objects which go in couples, and the mind is so anxious to differentiate them that if by chance the nouns designating them resemble each other, one of these nouns disappears and is replaced by another which is more competent to mark the difference between them. This is the case with the distinction of the sexes, both in men and animals. The fundamental pair, father and mother, which have always and everywhere distinct names (so far as the root is concerned, of course) served as a model. Following this example, other pairs have received different names : husband and wife, brother and

[1] Ulaszyn, **XXXIII**, vol. ii, p. 200.
[2] Michael Bréal, **XVI**, vol. xiv (1901), p. 113 ; Carl D. Buck, **XIX**, vol. xxxvi, pp. 1–18, 125–54 ; A. Meillet, **VI**, vol. xx (1916), p. 28.

sister, uncle and aunt, etc. Undoubtedly we must recognize a universal mental tendency in this carefully maintained opposition. The French have kept *fils* and *fille*, following the Latin usage ; but when the two sexes are opposed to each other (boy and girl) they no longer say *fils* but *garçon*. In creating the word pair *filius*, *filia*, the Latins departed from the Indo-European usage which the Germanic and Slavonic languages, as well as Greek, had retained. Celtic no longer uses the old names yet it has preserved the contrast : Irish *mac*, Breton *map* " son " ; Irish *ingen*, Breton *merc'h* " daughter ".

The Latin *dominus* and its feminine *domina* ended in an identical form in French, where it was used to express both genders. The memory of a masculine *dame* is retained in the oath *dame*, an abbreviation of the expression *Dame-Dieu*, and in the noun *vidame* ; but it is no more than a memory. The feminine word alone has remained in the language ; and a new masculine *monsieur* has been created and paired with it. The same thing took place in German. The German word *Frau*, Old High German *frouwa*, formerly stood side by side with a masculine *frô* (Gothic *frauja*). This masculine did not survive, but also fell a victim to its too great resemblance to the corresponding feminine. German to-day opposes *Herr* to *Frau* as the French *monsieur* to *madame*, or the English *gentleman* to *lady*.

Among animal names the same opposition is frequent. Latin had *equus* and *equa*, but *taurus* and *vacca*, *aries* (or *uerex*) and *ouis*, *catus* and *feles*, *uerres* and *scrofa*. In English, *horse* is opposed to *mare*, in French, *cheval* to *jument*, and in German *Pferd* to *Stute*. In French, however, there is no feminine *chevale* formed like *chatte* or *chienne*.

Yet the French are the authors of *mouton* and *brebis*, *bouc* and *chèvre*, *porc* and *truie*, *cerf* and *biche*, *sanglier* and *laie*, *coq* and *poule*, *lièvre* and *hase*. It represents a particular form of the feeling for contrast between the sexes which plays an important part in so many languages.

Even in the preceding examples psychology does not explain everything. The wear and tear that words undergo is always due more or less to the influence of a particular social environment. We must therefore consider the question of the renewal of vocabularies in its social aspect. The social factor is quite

evident when words are changed for reasons of propriety.[1] It is not becoming to speak in society of acts which are supposed to be gross or indecent, and words expressing these actions are banished from the vocabulary of well-brought-up persons. Various expressions are used to designate such acts, which are retained until such time as they also become gross and offensive to the polite ear. French has preserved no derivative of the Latin *mingere*; the verb *pisser*, which was substituted for it, is itself no longer used in polite society, but *uriner*, which is less vulgar. *Vomir* has been protected by its medical character; but it is a coarse term, and has been replaced by *rejeter*, *rendre*, *s'expliquer*, etc. German, in like manner, has replaced *sich erbrechen* by *sich übergeben*.

It is convention alone that determines whether words are polite or indecent, and the same word changes in character when passing from one frontier to another. The word *Pissoir* is less shocking in German than in French. The fact of its being a word borrowed from a foreign tongue lessens the brutality of the act expressed; it plays the part of a euphemism. There are certain ideas which are frequently expressed by means of such euphemisms, for example, the idea of death. Instead of *mourir*, the French say *périr*, *passer*, *trépasser*, *décéder*, *s'endormir*, *rendre son âme à Dieu*, etc.; and even simply *partir* or *s'en aller*, just as in English the act of dying is often expressed as perishing, passing, falling asleep, giving one's soul back to one's Maker, and the dead person is referred to as the departed, the deceased, etc. In Gothic, *usquiman* ("to kill") was used, as in the German *vergehen*, *erblassen*, *verbleichen* for "to die". These softened terms make the image of death less painful.

The number and nature of words which are regarded as shocking, vary according to environment and date. In a polite age, when women give the tone to society, the number is naturally greater. The vocabulary then becomes more and more restricted, and people speak by allusions. But as there are always occasions which compel us to find words for things, we are led to revising the vocabulary.

Physicians in France, and even sometimes in England, have recently abandoned the word "operation" in favour of "intervention", as the use of the former has been rendered brutal and apt to inspire fear. The sick person at once pictures

[1] Cf. H. Schulz, **XXXVI**, vol. x, pp. 129–73.

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to himself terrifying instruments, linen stained with blood, a body twisted by suffering. The word " operation " has become a victim to the images it evokes, and thus it tends to be replaced by " surgical intervention ", which is fresher, more discreet, and also more vague, and less disquieting to the patient.

Euphemism is merely a polite and cultivated form of verbal taboo (see p. 184). It frequently happens, among savages, that words have a mystical character which protects them from use by certain people. We have no taboos of this kind in our European tongues. Civilization has smothered these survivals of barbarism. But in retracing the history of the most highly civilized languages we encounter the phenomena of verbal taboo just as clearly as in the languages of uncivilized people.[1]

Many peoples regard the left as the magic side, where occult powers reside which it is ill to call forth. Even to mention the left by name was often forbidden. The result of this interdiction was the necessity to resort to paraphrases or metaphors in order to designate the left. Thus, whereas most Indo-European languages have retained the same word to indicate the right, they have many different words to designate the left, most of which extend to no more than a couple of languages, and are in turn liable to be eliminated and replaced.

The surest indication of the interdiction laid upon certain ideas and objects is in the existence of metaphors (for example, εὐφρόνη " the good counsellor " or ἀβροτη " that in which no person is " for " night "). But it is also to be found in the variety of terms used to designate them.[2] In Irish there are a dozen names for the bear, and as many for the salmon. We know from other sources that these two animals were taboo in the popular imagination. Animals that are hunted are generally invested with magic power ; many of them are hunters' taboos. Wild animals are also often designated by synonyms.

A verbal taboo results not only in the substitution of one word for another, but also in the mutilation of existing words. By changing or displacing a letter the offensive or dangerous forces in the word are mitigated without, however, diminishing its semantic value. Each one immediately understands the reference. The veil only hides the shocking aspect of the

[1] Meillet, *Quelques hypothèses sur les interdictions de vocabulaire dans les langues indo-européennes* (1906).

[2] Renan, **CX**, p. 142.

word or its indecent shade of meaning, allowing its main lines and general colour to appear quite clearly. In many languages oaths undergo a conventional alteration which allows them to be introduced into the best society ; thus, for example, *bigre* or *fichtre*. The French say : *palsambleu*, *parbleu*, *pargnieu*, *pardienne* instead of *par le sang de Dieu* or *par Dieu*, just as the English turned " By Mary " into " Marry ", " By God's Little Body " into " Odds Boddikins ", and just as the familiar " bloody " is merely a conventional oath derived from " By Our Lady ".

Since the names of physical defects or infirmities are particularly apt to become taboo, we should not be surprised that a single root denoting a physical defect gave rise in Germanic to three different terms by a modification of the phonetic elements. Gothic has preserved the three words : *daufs*, *bauþs*, and *dumbs*, applied to deafness, dumbness, and imbecility (German has now only two : *taub* and *dumm*). This is the same root of which a derivative has been preserved in the Greek τυφλός " blind " (see p. 205).

There is one root which in the sense of " foundation, depth " (whence French *monde*), presents some peculiar alterations in the different Indo-European languages. Eight or nine types have been counted, which differ among themselves only by reason of the well-known laws of dissimilation, assimilation, or metathesis, and by the use of the nasal infix or interpolated root. This is the family to which the Greek ἄβυσσος and πυθμήν belong, the Latin *mundus*, the Irish *domun*, and Welsh *annwfn*, Old Slavonic *dŭno*, etc. There is no doubt that the alterations of this stem were due to religious causes. The word signifying foundation, and by extension world, was an interdicted word. Its pronunciation was avoided, and in order to express it without risk it was altered so as to render it inoffensive while leaving it intelligible.[1] It is very remarkable that these alterations are of the type normal to the language ; they may be classed among the various changes which in the preceding pages we described as combinatory (see p. 61). The special pronunciation of the word in question seems like a slip of the tongue. But the apparent mistake is deliberate. It is a utilization, for mystic or decorous reasons, of verbal error and metathesis.[2]

[1] Vendryes, **VI**, vol. xviii, p. 308.

[2] Cadière, **LVIII**, contains, p. 30, examples of analogous mutilations for reasons of decorum and politeness.

Among the social causes responsible for vocabulary revision, we have to bear in mind the speaker's occupation. Words referring to the activities, intellectual or manual, of social groups are called cultural words.

Whenever any progress is realized in human industry, this progress is expressed by the use of new implements and processes for which corresponding new words will be created.

Changes in equipment are naturally reflected in the vocabulary. The Germanic languages signified bread by a word which appears in the early forms of each, and which in Gothic is *hlaifs* (genitive *hlaibis*). It was a very important word, like the object for which it stood, and was borrowed by the Lithuanians and the Slavs. Its importance in Germanic is also attested by the words derived from it : Old English *hláfweard* "loaf-ward" (to-day "lord"), *hlaefdige* "loaf-server" (to-day "lady"), Old Norse *witandahalaiban* "to the loaf-elder" (found in a Runic inscription). But this word denoted unleavened bread. When the knowledge of how to leaven the dough was acquired, a new name for a loaf, corresponding to the new process of making it, had to be found. This was the *brôt* of Old High German, the *brauð* of Old Icelandic, which is not represented at all in Gothic and which has no very definite form in Old English. In the modern Germanic languages both words have persisted side by side, but the newer is the more important. This is the German *Brot*, English *bread* ; while the other, English *loaf*, *loaves*, German *Laib*, either has a semi-poetic meaning or has been retained only with a special meaning. The creation of a new word does not necessarily destroy the old, but often relegates it to a special part of the vocabulary.

The word for horse was renewed in most of the Indo-European tongues. The original, found in the earliest forms of Sanskrit (*açvas*), Greek (ἵππος), Latin (*equus*), Celtic (Irish *ech*), and Germanic (Gothic *aihva*), has not survived in any of the dialects derived from these languages. Classical Sanskrit already had the forms *hayas* or *ghotah* (*ghotakas*), in modern Greek ἄλογον. French replaced *equus* by *cheval*. The Celtic languages have *marc*, *gearran*, and *capall* in Irish, *amws*, *ceffyl*, and *gorwydd* in Welsh, *marc'h* and *ronsé*, pl. *kezek*, in Breton. German has *Pferd* where English has *horse*, both words being new in Germanic. The Baltic and Slavonic words were likewise created from different words peculiar to them ; Lithuanian *arklys* or *Žirgas*,

Slavonic *lošadĭ* or *konĭ*, and Armenian likewise has *arivar*. The change is a general one. It cannot be explained by putting the onus on magic which might have made the old words taboo. The revision may have been due to the fact that there are different races of horses, and that among populations that rear and breed cattle it became necessary to distinguish one breed of horses from another. Yet this reason is also inadequate; for although there are also many very different kinds of dogs, the term for dog is much more stable. The French still say *chien*, as the Germans say *Hund*, the English *hound*, the Bretons *ki*, the Lithunians *szů*, the Armenians *šun*, all derivatives of the same prototype. That the term for horse has been altered almost everywhere, is due to the fact that the animal serves many purposes; there is the saddle-horse, the draught-horse, the plough-horse, and the war-horse. These different uses were expressed in the different social classes by special words. Thus in old Greek παρήορος refers to the chariot-horse or wheeler in a pair. Even in military usage the horse bears several names answering to his various uses; the charger is not the hack. Mediaeval German has numerous terms for horse, and they are all late words: *mór* (from the Latin *maurus*), *pâge* (from the Latin *paganus*), *burdihhîn* (from the Latin *burdus*), *soumâri* (from the Latin *sagmarius*), and lastly *pferid* (from the Latin *parauere-dus*), already cited. There is a complete contrast between the word for horse, which is so extremely subject to change, and those for ox and cow, which have survived almost everywhere unchanged (Greek βοῦς, Lat. *bos*, Ger. *Kuh*, Eng. *cow*, Irish *bó*, etc.), because, apart from the production of milk, the ox and the cow are still restricted to the same kinds of work and render the same services. Nevertheless, it is worth while to note the creation of special terms in certain tongues, applied when the animal is used as butcher's meat: English *beef*, German (partially, at any rate) *Rind*.

The multiplicity of uses involves the creation of different words. Apart from the more or less slang expressions used to denote coin (see p. 216), both French and, to a smaller extent, English have a large number of words for money, according to the social category to whom it is paid. The *gages* or *wages* of the domestic, the *traitement* of a functionary, the *solde* or *pay* of an officer, the *prêt* or *pay* of a soldier, the *appointements* or *salary* of a business employee, the *honoraires* or *fees* of a

physician or barrister, the *émoluments* of a public official, the *salaire* of a workman, the *paye* of a day-labourer, the *rentes* of a property-holder, the *mensualités* of a journalist, the *dividendes* of a stockholder, the *indemnité* of a member of parliament, the *casuel* or *stipend* of a priest, the *secours* or (modern !) *dole* of a pauper, the *feux* of an actor, etc., not to mention less precise terms like *rétribution*, *subvention*, *gratification*, *allocation*, etc. This varied vocabulary reflects the complexity of our present social order. On the other hand, the words *épices* (of a judge) or *bénéfice* (of a clergyman) which no longer mean anything, have lost the meaning they had in former days.

Lithuanian, the language of a rural people, has no less than five words for the colour grey. These words, however, are not synonymous, since each is applied to a different object ; *pilkas* is used for wool or geese, *szirmas* or *szirvas* for horses, *szèmas* of cattle, *žilas* of the human hair, domestic animals other than geese, horses, and cattle. The other colour names, though less varied, present contrasts of a similar kind ; in speaking of cattle the term *žaals* (red) is used, instead of the usual *raudonas* ; *dwylas* " black " instead of *jůdas*, etc. And for the idea of spotted or piebald, there are almost as many words as categories of animals. This bespeaks a nation both of cattle-raisers and of people for whom the colour of the dress is of great importance. There is a tendency among the stock-breeders of different sorts of animals to create a vocabulary of colour names peculiar to the beasts with which they themselves are concerned. The common language eventually profits by the results of this verbal autonomy created by special language.

In every age at which the aristocracy formed a closed caste, lived in salons, and prided itself upon the elegance of its speech, there arose an aristocratic vocabulary, from which every plebian word was excluded. " Given an equal wit, they (the people of the court)," said Duclos,[1] " have this advantage over the common run of men that they express themselves more choicely and in more agreeable periods." This choice vocabulary, which made it possible to detect immediately the class to which a speaker belonged, appears to us to-day as a stabilized whole, giving the impression of something complete and definite. Yet in reality this vocabulary was built

[1] *Considérations sur les moeurs*, 5th edition, Paris (1767), p. 211.

up from day to day of fugitive expressions that bloomed in the morning and maybe were doomed to perish by nightfall; they were born of an allusion, a witty turn of speech, or some puerile happening in which society found itself involved.

We know a little of these ephemeral vocabularies from what contemporary writers have given us, generally in satiric vein. In his *Précieuses ridicules*, 1659, Molière satirized the affected language used in the salons of his day. Boursault, in 1694, in his *Mots à la mode*, and Allainval in 1728, in his *École des Bourgeois*, ridicule, in their turn, the precious language of their contemporaries. The three vocabularies are different, and in glancing over them we see how rapidly the fortune of certain words arose and declined. Boursault's Madame Josse had the word *joli* perpetually on her lips; and she invariably substitutes the word *gros* for *grand*.[1] This fashion raged for a while, but for a very brief while, for the *avocat* Brice, Madame Josse's brother, enamoured, like his sister, of the language of the court, but better informed than she, feels it necessary to tell her that the word has had its day:—

> Laissez mourir en paix un mot agonisant;
> Hors chez quelques laquais qu'il est en étalage,
> En aucun lieu du monde il n'est plus en usage . . .
> *Gros* est un mot proscrit, ma sœur . . .

The difficulty in such a situation, if one does not live in these special surroundings, is to keep exactly posted as to what particular expressions are the latest fashion. Few of the people who pride themselves on speaking "the language of the boulevard" and of having a "Parisian wit" realize that the words they still use are already last year's words. M. Homais, the Yonville pharmacist in Flaubert's *Madame Bovary*, said *faire florès*, *turne*, *bazar*, or *Bréda-street* and *je me la casse* for "je m'en vais" when these expressions had lost their novelty on the boulevards.

The language of courtship ranks with the most evanescent. But its variations aptly reflect the evolution of manners, and in order to interpret it the social relations between the sexes must be taken into account. In times of wealth and luxury, when an elegant aristocracy can bestow great pains on love-making and turn it into a habitual pastime, there grows up

[1] Brunot, **LVII**, vol. iv, p. 222.

within the aristocratic language a special vocabulary relating to gallantry in all its phases. So it was in the princely courts of France in the Middle Ages, first in the south, and later in the north. In the seventeenth century, several of these gallant vocabularies succeeded each other, from that of the hôtel de Rambouillet with its map of the Land of Tender Passions to the Salons of Sceaux, held under the auspices of the Duc du Maine, and the gatherings of the Temple, of the house of Vendôme.

Many of these vocabularies passed into the literature of the day : *gloire, soins, appâts,* and *feux, cruautés, rigueurs, alarmes,* and many other terms which to Frenchmen to-day have a comical and old-world air. We consider them as being all of a piece, representative of that language of gallantry against which even Racine was not always on his guard. But, as a matter of fact, they are not all contemporaneous ; each has had its own history, its period of success and decline. To-day, when there is no longer an aristocracy forming a special caste in France, and when the extension of the demi-monde has made the practice of gallantry accessible to all social classes, there doubtless still exists a language of love, but a sort of common language which borrows its vocabulary from the slang and jargon of every environment ; there is no longer a language of gallantry as such, because gallantry is no longer the privilege of a certain class.

We are thus led to admit into a consideration of the changes of vocabulary the mutual influence of different special languages upon one another. A given French word may be imparted from the barracks : it was sought there because it was more expressive and emphasized more forcefully than any other what the speaker desired to say ; another may have been borrowed from the language of the drawing-room. There are also cases in which a foreign language, owing to the prestige it enjoys, has imposed upon its neighbours at least a partial revision of vocabulary. This explains the presence of such a large number of Latin words in certain languages such as Brythonic, or Old High German. These words do not always represent a new idea or object ; they are often substituted for words already present in the barbarian tongue ; it was prestige that assured pre-eminence to the Latin word. We must not forget the importance of prestige as a final social cause of the remodelling of vocabularies (cf. p. 282).

The linguistic processes by which remodelling is effected are easily referred to a few general types. The resources within a language itself are not inexhaustible. When by specialization a general word has been given a particular use, or the proper meaning of the word altered by metaphor or metonomy, all that it is possible to effect within the limits of the language's own vocabulary has been done. All these are but creations of *new meaning*.

The processes of derivation and combination considerably augment the possibilities of remodelling by providing scope for the creation of words. Once created, the derivative is perceived as a new word, and is immediately adapted to its destined object. For example, *bottine* has acquired a meaning altogether different from that of *botte*; *chausson*, *chaussette*, and *chaussure* have nothing in common so far as meaning is concerned, either with each other or with their theme *chausse*. The same is true of compound words, whose elements unite instantaneously never again to evoke any but a single image in the mind.

In dealing with a new object, a frequent device is to give it the name of the man who invented it, propagated it, sells it, or contributed in some fashion to its success. To this process, we owe many French words: *calepin*, *guillemet*, *barème*, *godillot*, *quinquet*, *catogan* (borrowed from the English but derived by the means in question), *bottin*, *poubelle*, *gibus*, *pépin*, *riflard*, *silhouette*, *fontange*, etc. The employment of this process does not always presuppose the invention of a new object; it can be applied equally well to a long-familiar object, whose name for some reason has to be revised.

If all these methods do not suffice, recourse is had to borrowing. Vocabularies of neighbouring peoples, which may belong, moreover, to languages very different in character, are laid under contribution. Thus a patois, slang, provincial dialects, and foreign languages are borrowed from, and the borrowing is always determined by particular circumstances which determine or regulate the choice.

Cultural words are particularly liable to be borrowed. They are transported along with the objects they denote; the objects serve them as a vehicle, and sometimes carry them to a great distance: *rem uerba sequuntur*. In making a list of the words borrowed from the Latin by the Northern peoples, Bretons, Irish, Anglo-Saxons, Germans, Baltic peoples, Slavs, we see

that they are very nearly the same ; and among these words a fair number had already been borrowed by the Latins from the Greeks.[1] It may be stated as a general principle that once a word crosses the frontiers of its own language, it has a good chance of travelling far afield, since it is only spoken by foreigners in designating some new object peculiar to the country from which it has come ; and we should therefore naturally expect to see it penetrate wherever this new object is sought.

In addition to the vocabularies of neighbouring countries, many languages have a special reservoir from which they can draw at will. This is the reservoir of classical and dead languages. Latin has ever served the occidental languages of Europe as a source of new names for things. The French vocabulary is crowded with Latin words, introduced in proportion as new needs arise and modified in form only according to certain principles of combination, for which the French retain the feeling. Latin has likewise provided English with many words, and, to a much smaller degree, German, which is sufficient unto itself owing to the great variety of its dialectal vocabularies and in which it is possible to bring about a considerable increase in words by the process of combination. Greek has served as a reservoir for the Slavonic tongues, especially Russian, which has, besides, the permanent resources of the Old Slavonic vocabulary with which contact has been maintained through the influence of the Church (see p. 267).

There are so many facilities for remodelling a vocabulary, that certain languages have actually abused them. English has been accused of harbouring an excessive vocabulary encumbered with synonyms which common use rapidly rejects and always ready to demand new ones from its habitual reserve, Latin, not to mention incidental sources which are foreign to it. Neither is French without reproach in respect of the avidity with which it adopts new words whilst the old ones still preserve their vitality and are adequate to express its needs. This is a disadvantage arising out of a privileged situation which gives a free hand to borrow what is lacking, even for temporary use.

Under these conditions, it is rare, because useless, for a

[1] See J. Loth, **LXXXIX** ; Vendryes, *De Hibernicis vocabulis quae a Latina lingua originem duxerunt*, Paris, 1902 ; and F. Kluge, *Vorgeschichte der altgermanischen Dialecte*, 2nd ed., Strasbourg, 1897, p. 333.

language to force completely new words by combining phonemes. The utmost it ventures to do is to modify the relations of the phonetic elements of a word. The process is well known in slang (see p. 254); but slang mutilates; it does not create. Creation is extremely rare.[1] If examples of it have been cited here and there, they are but curiosities. For example, the word *gaz*, invented in the eighteenth century, the word *rococo*, or the word *félibre*,[2] and those of our day such as certain names of produce, provisions, or implements, like the word *kodak*, which sprang full-fledged from the brain of its inventor. It would be impossible to invent any number of such words without risking the clearness of speech. These words have merely the value of proper nouns which call forth no precise ideas if the persons bearing them are not known; they must be surrounded by a context serving them as explanatory commentary. Caution must be exercised, therefore, in increasing the number of such words. Furthermore, they are very difficult to invent. Nothing is more difficult than to create a word without being influenced by those processes of derivation or combination habitual to one's own language. In fact, there is always something that imposes on us our choice.[3] It has been claimed, with some reason, that the word *gaz* contains some reminder of the word *Geist* or *ghost*; which would mean that we were simply dealing here with the mutilation of an existing word. This is the case also with the word *jingo* which arose, it is said, from a form of an oath *by jingo*, substituted for *by Jove*, itself an euphemism common in the jargon first used by Oxford undergraduates. As for words like *rococo* or *kodak*, they have an undeniably expressive value. They are onomatopœic words, and belong to a category whose principles and systematization are nowadays stabilized.[4] The word *kodak* creates an auditive image. We imagine we hear the click of the mechanism which releases the shutter. Did the inventor of the word realize this value and desire to make an imitative harmonic symbol? It is possible, but such a desire is by no means a necessity. There is always

[1] Jespersen, **CXXXIII**, chaps. v and vi. See R. M. Meyer, **XXX**, vol. xii, p. 257.

[2] Darmesteter, **LXIII**, vol. i, p. 23; G. Paris, *Penseurs et poètes*, p. 94; but see also Jeanroy, **XVIII**, vol. xxxiii, p. 463.

[3] Renan, **CX**, p. 147.

[4] Grammont, "Onomatopées et mots expressifs," in **XVII**, vol. xliv, p. 97.

an unconscious accord established between sounds and things. The impression produced by an unknown word may vary with different people, but there is always an impression of some kind. The difference depends upon the degree of sensibility, imagination, or merely nervous excitability of the subject. In giving any object a name which is completely manufactured, we cannot but be unconsciously guided by subjective connexions between the sounds and the object. A word like *kodak* conforms, moreover, to the rules of onomatopœic language ; the consonants have the proper articulation, and the vowels have the exact timbre imposed by the laws of M. Grammont. It is, indeed, so well made that we ask if it could possibly have been made otherwise. The faculty of creating new words is probably illusory. This conclusion leads us to the great principle of linguistic evolution, according to which languages progress by the transformation of existing elements, and not by creation.

PART IV

THE STRUCTURE OF LANGUAGES

CHAPTER I

Language and Languages

THE analysis we have thus far made of the different parts of language can convey only a fragmentary and incomplete idea. It is an artificial distinction that we have drawn between the three elements to which the preceding chapters are devoted—sounds, grammatical forms, and words. Different as they may seem, they are intimately connected, and have no separate existence. They melt into the unity which is the language itself. The task of the linguist, therefore, is still incomplete when he has made an analysis of these elements. It remains for him to study these elements as they are when united in a complete whole; in a word, how language operates.

But when we undertake to postulate a general theory of language we must guard against a twofold danger. In virtue of one of the antinomies pointed out by Victor Henry,[1] language is both a single entity and multiple; it is the same for all peoples, and yet it varies infinitely with each speaker.

It is manifest that two individuals never speak exactly alike. For the phonetician who can observe language only in its individual peculiarities, it is confined to the individual. And not least among the defects of descriptive phonetics is its habit of restricting linguistics to the study of individual facts. To him also who seeks to find in language the reflection of feeling, emotions, and the passions of the human soul, it is as individual phenomena that he sees his facts. As soon as a symbol is admitted by convention it has a general value. But the particular acts which give rise to symbols, and by which symbols evince their presence more or less in the nascent stage, can only be grasped one by one in their individual manifestations. While it may be incorrect to believe that linguistic innovations begin with the individual, it is none the less true that each individual introduces into the language certain innovations peculiar to himself. Hence it is not altogether unreasonable after all to claim that there are as many different languages as there are individuals.

[1] **LXXXIII,** p. 5 ff.

But neither is it unreasonable, on the other hand, to claim that there is only one human language which is fundamentally identical in all latitudes. Indeed, this is the idea which emerges from the attempts of general linguistics to formulate principles which shall be applicable to every type of language. In reality, the phonetic system obeys the same general laws among all races ; the differences we observe between them are only the result of special circumstances. There are doubtless many varieties of morphological expression ; but the three or four main types to which these varieties can be referred back are not in themselves absolute, since history shows them merging into one another. None of them, furthermore, suffices to characterize the language of any single human being. As for vocabulary, it rests upon the principle that a certain group of phonemes is associated with a certain idea. This principle is everywhere the same and is valid for language in general.

A general theory of language is thus faced at the start with this difficulty ; the linguist does not know where to place the bounds of his study, and it swings to and fro between individual considerations on the one hand, and considerations as wide as humanity on the other. Nevertheless, this difficulty is immediately diminished as soon as any attempt is made to represent language as a reality, and not as an abstraction. Language, being a form of activity, has a practical purpose, and in order to understand it, therefore, we must study it in its relation to the whole of human activity—to life itself.

We have already alluded to the " life of language ". While recognizing how inexact and ambiguous this metaphor is, it can nevertheless be utilized as an hypothesis for guiding research or rendering didactic exposition more convenient. But the data upon which we have worked so far were but abstractions created by the mind of the linguist ; and it is almost a contradiction in terms to speak of the life of language in connexion with the very things which are devoid of life—sounds, grammatical forms and words. The life with which we must now concern ourselves is the sum of those conditions in which humanity moves and has its being—reality in its infinite manifestations. It is very evident that language participates in life, thus understood. But in that case we no longer have before us a theoretical system of abstract principles, but are dealing with the actual languages spoken in very varied fashions all over the globe.

There is this difference between language and languages; language is the sum of those physiological and psychical processes which the human being has at his disposal for speech, whereas languages represent the practical utilization of these processes. In order, therefore, to arrive at the definition of a *language*, we must go beyond the limitations we set ourselves in the preceding chapters, and study the rôle that language plays in organized human society.

The first idea which presents itself to the mind is to link language with race. The sole extensive manual of general linguistics in existence, that of Friedrich Müller,[1] is based upon this idea. The author reviews in turn the languages of peoples with curly hair, and of those with straight hair, and languages are classed according to ethnical characteristics. The reader generally feels that nothing could be more extraordinary than this arrangement; but, what is a far more serious matter, even the principle will not bear examination. Opinions as to race should always be taken with many reservations.[2] Whatever be the rôle played by changes in race in the transformations of language, the essential bonds between these two concepts cannot be established. We must not confound hereditary ethnical characteristics with institutions such as language, religion, and culture, which are eminently transmissible, and can be borrowed and exchanged.[3] Glancing over the linguistic map of modern Europe, we see that under the uniformity of the same language very mixed races may be concealed. A negro or a Japanese brought up in France under the same conditions as a French child speaks French like a native. This fact suffices to render futile any attempt to harmonize language with race.

May we go so far as to say that a certain mentality corresponds to each language? The psychology of peoples speaks of a French mentality and a German mentality; if it be true that the language is but an expression of mentality, the difference between them ought to find expression in language. This reasoning, unassailable in principle, is difficult to verify, and in practice lays itself open to numerous objections. In the

[1] **CLXXXV**, cf. also Byrne, **CXXXI**, vol. i, p. 45.
[2] E. Renan, **CXI**, p. xv.
[3] Whitney, **CXXIX**, p. 231.

first place we must be careful not to infer that a different mentality means a different brain. This would be to introduce afresh the idea of race into a psychological question. Even in contrasting a black with a white man, we have no reason to believe that the colour of the skin or the shape of the lips corresponds to a particular brain, which could produce thoughts different from our own.

In any case, such reasoning could not be applied to individuals of the white race between whom are no essential ethnical differences. We know that the colour of the eyes, hair or skin, and the head formation, furnish no criterion for distinguishing a German from a Frenchman from an ethnical point of view, still less a linguistic one. And yet there is no doubt that between the two peoples there is a difference of mentality—that they have national tastes, habits, and temperaments. But these national temperaments all have the appearance, like the languages themselves, of being effects and not causes. It is just as arbitrary to make language the outcome of mentality as mentality the outcome of language. Both result from circumstance, and are the product of culture.

This conclusion is not enunciated in order to discourage those who dream of finding a connexion between the two ideas. For it is possible for language and mentality to be the product of identical causes and to present the same characteristics without one being the outcome of the other. If a language is the distinctive mark of a certain thought-form, a comparative analysis of languages ought to lead to a psychology of race. This was the idea Herder put forth in his treatise on the origin of language, and also that of Wilhelm von Humboldt and Steinthal. In our own time, another German linguist, F. N. Finck, has revived Herder's idea while attempting to complete it.[1] According to him, a language must be considered only as an act interpreting the soul of a people: languages are thus merely *répresentations*, and offer no tangible reality to the eyes of the psychologist. To treat them as realities is to become the victim of illusion. A wholly subjective method should be applied to them, beginning not with language, which is only a result, but with the mind which creates language. This is the method which best suits the study of certain products of psychic activity, such as popular beliefs ; it is equally effective

[1] CLX.

in the study of fear, dreams or faith. This takes us far from the domain of linguistics !

We can reply to Finck that a language is, nevertheless, a reality.[1] By reason of its phonetics and morphology, a language has an existence of its own, independent of the psychic tendencies of the speaker. His language comes to him as something already organized, like a tool put into his hand. He uses it for varied purposes ; he employs it for commonplace needs or for a display of virtuosity. But it is always the same instrument, and the business of the linguist lies precisely in studying the essential and permanent qualities of this instrument. Accordingly, the objective method against which Finck protests is perfectly applicable to linguistics, and language can be studied independently of mentality.

It is not certain, moreover, whether the causes affecting language produce symmetrical effects upon mentality. The essential and permanent elements in language are transformed by virtue of principles in which the mentality has no part. It is this which gave rise to the hypothesis of a " language life " independent of all psychic, physiological or social life. In fact, the differences which can be observed between two languages at any given moment of their history, even of peoples whose languages are related, is to be explained by purely linguistic phenomena in the development of each language, and accordingly does not justify conclusions as to the mentality of peoples.

This observation is applicable to the most striking characteristics which can distinguish two languages. Word-order, for example, is a process full of meaning. Its very roots seem to be sunk deep in linguistic consciousness, since it is found right at the origin of the preparation of the verbal image. But we know that the structure of a sentence in German, Irish, or modern Armenian, is the result of special morphological transformations in these languages (cf. p. 144) ; as the linguistic historian reviews the past, he discovers in the very different syntactical structures the action of internal laws explained by the development of each language.

It is natural and reasonable to contrast languages which use the process of combination, with those which, on the contrary, avail themselves of the process of derivation ; Greek

[1] Meillet, **II**, vol. x, p. 664.

as distinct from Latin, German as distinct from French. Apparently these also present two different types of mentality, since in once case the mind, after having broken up the representation, expresses in detail the elements resulting from the analysis, while, in the other, it only indicates one aspect of this representation, leaving the hearer the task of substituting the others. As a matter of fact, however, the two processes are the result of more or less well-developed habits ; they are never mutually exclusive, moreover, and their use in every language is only a matter of degree. It is enough for a certain type to predominate at a given moment in any language for this type to be repeated again and again in the course of ages. It is a direct effect of the competition of morphological processes in no wise dependent upon differences in mentality.

The mentality in both cases is the same. The expression alone is different. The fact that one language says *liber Petri* and the other *le livre de Pierre* does not imply that the people speaking these languages conceive the relation of possession in a different way, but merely that they express it differently. And for this difference there are historical reasons. In the present state of our means of research, any attempt to discover the soul of a people by the character of its language is a chimerical enterprise. Even vocabulary reflects mentality imperfectly. French possesses only the one word *louer* to translate the two German words *miethen* and *vermiethen*, whose meanings (to rent a house and to let it) are opposed to each other. It is a vexatious ambiguity in the French language ; but, conversely, the German word *lehnen* signifies both " to lend " and " to borrow ". Languages are also known which employ the same word for " selling " and " buying ".[1] Ought we to draw from these facts any indication of the manner in which different races conceive of a loan or a sale ? By no means. A vocabulary never renders all the aspects of thought. There are always fewer words than ideas, but ordinary usage is content with approximations, as it has other means of avoiding ambiguity. The meaning of each word is made clear through the context, and if this does not suffice the language is never at a loss to remedy this deficiency.

[1] The Chinese, for example, say *mâi* and *mài* ; the only difference lies in intonation (Gabelentz, *Chinesische Grammatik* (1881), § 230, quoted by Jespersen, **CXXXIV**, pp. 84–5).

In actual fact, French suffers little from the ambiguity of the word *louer*, nor does German suffer more from the ambiguity of *lehnen* than does Breton from having only one word (*glas*) for " green " and " blue ", or from having to express in the same way " the sky is blue " and " the beans are green ". Whatever branch of language we are considering, it would seem that we are mistaken if we try to find in it the index of a special mentality. This does not mean that there is no relation between mentality and language. Sometimes language can even modify and regulate mentality. The habit of always placing the verb in a certain position leads to a particular manner of thinking, and may have a certain influence on the course of an argument. French, German, or English thought is subordinated to a certain extent to the language. A light and flexible language in which grammar is reduced to a minimum allows the thought to appear in all its clarity and permits it freedom of movement. On the other hand, thought is hampered by the constraint of a rigid and heavy language. The mentality of the speaker, however, reacts so as to accommodate itself to any linguistic form whatsoever. It is impossible to define a language by the temperament of the people speaking it. The study of language in its social aspect gives us the best idea of the nature of a language.

It is a truism to-day to state that man is primarily a social being. One of the traits which testifies most eloquently to man's social character undoubtedly lies in that instinct which urges individuals dwelling in communities to make common cause in so far as their like circumstances or characteristics are concerned, at the earliest opportunity, in order to oppose themselves to those who do not present the same peculiarities to the same extent.

This instinct is very powerful, and is found in all sections of every social organism ; it has its origin in the very fact of community. When a solitary Frenchman meets a Persian on a desert island, each will forget the differences between them and they will naturally seek to make common cause. Their equality in such isolation develops their comradeship. But should a Persian travelling in France happen to be introduced at the Cours la Reine, national feeling, which strengthens group existence, will suggest to the French the celebrated

phrase: "How *can* anyone be a Persian?" A solitary cavalryman readily fraternizes with an infantryman whom he may meet: but in cities where regiments of both arms are stationed at the same time, we know that this promiscuous relationship often engenders quarrels which force the authorities to intervene and re-establish order. It is not even necessary for there to be two different sorts of troops, whose function, uniform, and place of recruiting are different. Within the same regiment, in the same barracks, rivalries frequently arise between one battalion, one company or mess, and another, the sole cause of the trouble being the difference between two fatigues, two commands, or two numbers. The slightest difference adds fuel to this rivalry. One would say that once men are grouped together they take advantage of the most trifling circumstances to assert one special group-consciousness against another.

It is not a case of motives of vanity due to some feeling of superiority coming into play. *Esprit de corps*, it is true, is generally accompanied by some inward satisfaction—a sense of pride which willingly provokes and humiliates others. But these feelings are the result of the *esprit de corps*: they do not create it. It is the very fact of community which creates it. The group itself has nothing personal about it, and takes no account of the respective worth of the individuals who build it up. From the moment a newcomer enters the group, he is accorded the same rights as the others; having at most to undergo some such mock test of worthiness to come among them as is represented by school or regimental "rags" which are perhaps only a survival of ancient rites of initiation. Finally, the group is not governed by any legal provisions. The bond uniting the members is not the result of any previous understanding, nor of any force imposed from outside. It resides simply in a community of occupations, interests, and necessities, and its strength is proportionately greater when side by side with it there exist other groups with different occupations, interests, and desires.

In any social group, whatever its nature and however large it may be, language plays a rôle of primary importance. It is the strongest of the bonds uniting the members of the group, and is at the same time the symbol and safeguard of their common life. What instrument can have greater efficacy

than language in affirming the individuality of the group? Flexible, fluid, and full of fine shades of meaning, it lends itself to many and varied uses, and constitutes the bond that unites the members of a group; it is their sign of recognition, and their badge of brotherhood.

Every member of the group has the feeling that he is speaking a language different from that of the neighbouring groups. Language, therefore, has a real existence in the community of feeling possessed by those who speak it. This definition, at first sight purely subjective, is also based on the fact that to the sense of community in language is added the consciousness in each speaker of a feeling for a certain linguistic ideal, which each one personally endeavours to realize.[1]

A kind of tacit understanding is naturally established between individuals of the same group in order to maintain the language according to prescribed rules. This rule often depends, not without reason, upon custom. But custom is not arbitrary; it is, in fact, quite the opposite. It is always determined by the interest of the community, which in this case is the necessity to make themselves understood. Accordingly, each member of it sets himself unconsciously and instinctively in opposition to the introduction of anything arbitrary. Isolated infringements of custom are immediately detected, and ridicule sufficiently punishes the culprit and deprives him of any wish to commit the error again. For an infraction of the customary usage to assume the force of law, all the members of the community must be equally inclined to commit it, that is to say, it must be looked upon as the rule and therefore is no longer an infraction of rule.

The rigorousness of such a rule is considerable, and this is true for all linguistic communities and all languages. We sometimes hear even cultured people declaring their astonishment that the language of a peasant should have rules and a grammar of its own. They imagine that rules only exist in the books given to schoolboys, and that an unwritten language cannot have any rules. This is a fallacy. Rural speech, or dialect as we call it, is often governed by stricter rules than the languages learned from grammars. It is written languages that admit of doubts and discussions among scholars, and over

[1] For the ideal of accuracy in language, see Noreen, **XXX**, vol. i (1892), and Setälä, **XXVIII**, vol. iv (1904), pp. 20–79.

which, as Horace said, *grammatici certant*. But those who speak a patois are scarcely ever in doubt. Listen to a peasant discussing the patois of a neighbouring village ; he will immediately discover differences which are hardly perceptible to the stranger, and will proudly affirm that himself and the people of his village alone speak properly and correctly, and that the correct method of speech ends with the brook which bounds his own side of the valley.

Men and women of the people generally have a quite precise idea of their language ; they sense with a rare nicety the slightest departure from its rules. Malherbe found a most accurate feeling for language among the porters of Port-au-foin, and he took them, he said, for his masters.[1] We know what misadventure befell Theophrastus of Lesbos in the market at Athens. When he asked the price of some commodity, a woman of the people recognized him as a stranger by his speech.[2] Indeed, it is the people who should be consulted when there is any doubt about a question of usage. It is very well for academies to discuss whether *automobile* is masculine or feminine, and to pile up argument against argument. All that is theory. In practice, the people soon decided that the word was feminine. If there was a moment of doubt, it was because in many cases (see p. 94) the gender of this word could not be shown, which merely amounts to saying that in some of its uses the word has no gender. But wherever it is felt to possess gender, that gender has been established as feminine : *une belle, une grande, automobile, l'automobile est verte ou grise*.

This solicitude for correctness and assurance in the stabilization of custom is what has made a language in any given community. But if we were to look for the perfect realization of any language we should not find it.[3] There are many people who speak French, but there is no French speaker competent to serve as a law and an example to others. What we call French does not exist in the language spoken by any human being. To ask where the best French is spoken is an equally idle question. The best French is simply an " idea " in the sense in which La Bruyère employed this word : it is a fiction like

[1] *Mémoires pour la vie de Malherbe*, par le marquis de Ragan, § xlvii.
[2] Cicero's *Brutus*, vol. xlvi, p. 172 ; Quintilian, vol. viii, p. 1.
[3] Meillet, **XCIII**, p. 357.

the wise man of the stoics, who was perfect, beautiful, good, healthy in mind and body—" at least," as the poet has it, " when he was not troubled with phlegm." The best French, likewise, is at the mercy of lapses of memory, vulgar mispronunciation, slips of the tongue. It is an ideal which can be sought but never found ; a force in motion, to be defined only by the end to which it is working ; a potential reality never actually realized ; a becoming which never comes.

We might sum up the preceding by saying that a language is the ideal linguistic form imposed upon all the individuals of the same social group.

But we have yet to define the group. In a word, this will be the object of the ensuing chapters, for it is the nature and size of the group which determines the character of the language. In France, together with the literary tongue, which is everywhere used as a written language, and which cultured people claim to realize in speech, there are dialects such as those of the Franche-Comté, or of the Limousin, which are themselves subdivided into a large number of local sub-dialects. There are, therefore, as many languages as groups. On the other hand, in a city like Paris there are a number of different languages superimposed upon one another. The language of the drawing-room is not that of the barracks, nor the language of the bourgeoisie that of the working-classes ; there is the jargon of the courts, and the argot of the faubourgs. These languages sometimes differ so much among themselves that you may know one of them quite well and yet understand nothing of another.

This diversity is due to the complexity of social relations, and since an individual rarely lives entirely in one social group, there is hardly a language which does not overlap other groups. Each individual, in the course of his migrations, carries with him the language of his own group, and this leaves its influence on the neighbouring group into which he has been introduced.

Even two families living side by side do not use exactly the same language ; but the difference, even if it contain in germ the principle of a variation destined to manifest itself in the future, is felt so little for the time being that we are quite right in taking no account of it. Besides, the speech used as a

medium for the exchange of thoughts between these two families is bound to bring about a unification of the two languages, since mutual relations will tend from the outset to lessen the differences and establish a common norm. Imagine two brothers living together, but carrying on different trades. Each, in the workshop, will come in contact with different groups, and will inevitably adopt their language together with their habits of thought, occupations, and tools. But the distinction between the two brothers established during each day—although if they should not happen to see each other for a long time it would amount, in the current phrase, to their no longer speaking the same language—will yet be effaced every evening by the very fact of their intercourse. Thus they are in turn submitted, every few hours, to two contrary influences, and their common language is constantly being purged of certain elements of dissociation which have been brought in from the outer world.

This is a good example of that struggle for equilibrium which is the law underlying all linguistic evolution. Two contrary tendencies draw languages in opposite directions.[1] One of these is the tendency to differentiation. The development of language, such as we have sketched it in preceding chapters, is ever tending towards differentiation into a growing number of parts. The result is gradual disintegration, which is accelerated in proportion to the amount of use a language receives. Individual groups left to themselves, deprived of all contact with each other, would be hopelessly condemned to such disintegration. But complete differentiation is never achieved. One all-important reason arrests it on the road. That is the fact that the unrestricted narrowing of groups between which language serves as a medium of exchange eventually deprives language of its reason for existence; it would only annihilate itself if it became unsuitable as a medium of communication between men. So it happens that the tendency toward unification is always at work against the tendency towards differentiation, and equilibrium is re-established. From the interplay of these two tendencies arise all those diverse kinds of language, such as dialects and special and common languages, which we shall now consider.

[1] Meillet, "Unification et différentiation dans les langues" (**XLII** (1911), p. 402).

CHAPTER II

Dialects and Specialized Languages [1]

IT is always possible to delimit a language geographically by contrasting it with languages of a different type. We know that the limits of French are set just at the point where it begins to clash with German, Basque, or Breton. They can almost be fixed to the very village, or even within the village itself, to a valley, or a brook ; a mere street may often be the dividing line. We can thus speak of French, German, Italian, Hungarian, or Serbian. All these languages are contrasted with each other and definitely circumscribed.

Nevertheless, we experience a certain difficulty in tracing the respective frontiers of French and Provençal, High or Low German, Serbian or Bulgarian. Here we are no longer concerned with two languages of different origin, brought into contact by the chances of history, but rather with languages of a common origin which have been differentiated by the circumstances of their history. The transition from one to the other is insensible, and they do not confront each other with any striking contrast of expressive equipment. The difficulty becomes still greater when we try to establish lines of demarcation between dialects of the same linguistic domain.

It is an established fact to-day that linguistic peculiarities never have an identical area of distribution, in other words, that the isoglossal boundaries do not coincide, but are independent of each other.

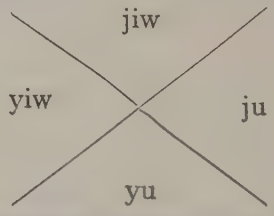
In this respect examination of a linguistic map is most instructive. The *Atlas linguistique de la France* [2] gives a differing boundary for each observed variation. Let us imagine a dozen small villages scattered over a considerable area in some French Department. The inhabitants of all these

[1] On the question of dialects, cf. Ascoli, *l'Italia dialettale* (**XLI,** vol. viii, pp. 99–120) ; L. Gauchat, " Gibt es Mundartgrenzen " (**XXV,** vol. cxi, 1904, pp. 365–403) ; Tappolet, *Ueber die Bedeutung der Sprachgeographie, Festschrift Morf*, p. 385 ff. ; J. Huber, *Sprachgeographie*, **III,** vol. i, p. 89 ff. ; and especially the works of Gilliéron, Jaberg, and Terracher. On special languages in general, see Lasch, *Mitteilungen der Anthrop. Gesellschaft zu Wien* (1907) ; Van Gennep, **XIV** (1908), i, p. 32, and **LXXIV.**

[2] *Atlas linguistique de la France*, Champion, Paris ; see Gillerion and Roques, **LXXVI.**

villages speak the same language, in the sense that their speech has the uniformity of a special type of French, and is the result, historically speaking, of the independent development of the same language over a continuous area. At the same time, between one village and another there are notable differences. From the view-point of phonetics, grammar and vocabulary, a different description could be given of each village.[1] Yet it is unusual for the peculiarities of one village not to extend, more or less, to the neighbouring ones. But the geographical limits of each peculiarity, taken singly, will scarcely ever coincide. Thus in five or six villages out of the twelve examined, some will pronounce *a* where others have *e*, or *o* where others have *u*. But the transition line from *a* to *e* is not the same as that from *o* to *u* ; thus the villages in which these modifications occur are not the same. In other words, the distribution differs.

For example, in the Department of the Landes [2] there are four areas for the pronunciation of the word *joug*, unequal in size, and distributed somewhat as follows :



The lines of demarcation in this instance lie first in the pronunciation of *j* (French *j*) instead of initial *y*, and secondly in the pronunciation *iw* in place of *u*. The areas of these two phonetic phenomena do not coincide ; nor do they coincide with the alternation of *d* and *z*, which practically divides the region into two parts [3] :

laide | *laize*

nor with such a morphological phenomenon as the contrast between the simple and compound preterites (*il écrasa*, *il a écrasé*), whose boundary forms a sinuous line which divides the territory of the department in a curious fashion.[4]

[1] Gauchat, "L'unité phonétique dans le patois d'une commune" (*Festschrift Morf*, pp. 175–232).
[2] Millardet, **CII**, p. 245.
[3] Ibid., p. 249.
[4] Ibid., p. 199.

When the vocabulary of the same Department is studied, we find four different words for *étang* (a pond) according to different villages—*estan, gourgue, pesque,* and *clote* [1]—and three for *corbeau* (raven)—*croque, corbe, courbas* ; [2] but the respective areas where these words occurred did not coincide with those having different words for *étang*. Thus it is apparent that the data relating to vocabulary present the same irregularity of distribution as those relating to phonetics and morphology.

The natural consequence of this state of affairs is that a number of philologists have maintained that dialects do not exist. For these scholars the linguistic conditions that arise out of the development of language can be conceived under two aspects only : firstly that of the language, the great whole to which all local forms of speech may be referred, and secondly that of the local specialized forms of speech into which the language breaks up. This, in a general way, is the conception of the Romance philologists, expounded in so masterly a way by Gaston Paris and Paul Meyer. " No real boundary," said the former, " separates French people of the North from those of the Midi ; from one end of our national soil to the other our popular speech extends like a huge tapestry whose varied colours shade into one another in scarcely perceptible gradations at every point." [3]

Johann Schmidt's *Wave Theory* (*Wellentheorie*) is akin to this conception.[4] The latter maintained that each linguistic datum spread like a wave over each district, and that each such wave in its gradual advance was without a definite boundary. He based his theory upon a study of the Indo-European languages, in which, as a matter of fact, the isoglossal coincide no more than they do in the Romance languages. However, M. Meillet is quite justified in his defence of the reality of Indo-European dialects.[5] He has shown that a dialectical distribution can be established from the Indo-European onwards. This distribution rests upon the principle that, wherever a large number of linguistic boundaries practically coincide, it is legitimate to speak of dialects. A definite dialect exists in any area where

[1] Ibid., p. 208.
[2] Ibid., p. 175.
[3] Dauzat, **LXV**, p. 217 ff., with references to Schuchardt, Ascoli, G. Paris, and P. Meyer. Cf. G. Paris, **CVI**, p. 434.
[4] **CXCIX** ; cf. K. Brugmann, **XXXI**, vol. i, p. 226 ff.
[5] **XCVII.**

common peculiarities are found. Even if the boundaries between two adjacent areas should prove to be somewhat fluid, it is still true that each area can still be defined as a whole by certain general features which the other does not possess. Thus, Provençal and French are at bottom only two dialects of the same language; and even though it may be difficult to trace on the map an exact line showing precisely where French ends and Provençal begins, each has nevertheless, *en bloc*, acquired characteristics in sufficient number and sufficiently well-marked to render confusion impossible.

Even within the French domain we can establish dialectical divisions by selecting certain special features which suffice to define the dialect. Thus the dialect of Picardy is contrasted with the French of the Île-de-France in that it preserves the occlusive *c*, which has been transformed in the French domain into the modern diagraph *Ch*, which the French describe as "chuintante"—*keval*, *kamp*, *kar*, for the newer *cheval*, *champ*, *char*. It is true that this criterion, excellent as it has proved in contrasting the dialect of Picardy with French, is not of any value, as Paul Meyer has demonstrated, in distinguishing this same Picardy speech from its northern neighbour Walloon, or from its Western neighbour the dialect of Normandy. Between the speech of Picardy and Walloon, or between the dialects of Picardy and Normandy, however, there are other distinctive characteristics which make it possible roughly to fix the boundaries of these dialects.

Furthermore, the people using these different varieties of French do not confuse them. The dialectal division corresponds to a genuine feeling on the part of the people in the same region for speaking in a manner different from that of their neighbours. The people of Picardy in past times obviously felt that their dialect was as different from the French of the Île-de-France as from Walloon or Norman French. The explanation was that the Picardy speech as a whole, though spoken with slight local variations, extended over a very wide area, and throughout that area was characterized by certain dominant peculiarities which differentiated it, in the minds of those who used it, from neighbouring dialects. And this explains how it came about that literary works could be written in the French of Picardy.

No doubt, as we shall see later (p. 273), literary languages which

rest upon dialect—possess a dialectal basis, as we might say —do not exactly represent the speech of any one locality in the domain of such dialect. This is as demonstrable for France in the Middle Ages as in Ancient Greece. But that does not mean that dialect does not exist. It exists to the same degree as the common language; it has a certain ideal existence. For a Frenchman *Saint Alexis* is written in a different dialect from *Saint Leger*, or the *Cantilène de Sainte Eulalie*.

In Greece, the epic dialect was not the lyric dialect; and in the drama two different dialects were employed for dialogue and chorus. These dialects were originally based on the speech of some particular region in insular or continental Greece more or less wide in extent; and each possessed sufficiently numerous and characteristic features to merit the name of dialect. Owing to the use of which poets put them, they became literary languages, and literary languages of this type differ very little from special languages.

Having thus defined dialect, it will be well, before studying it in relation to the common language, to say a word about special languages. For these, like dialects, but for different reasons, are the result of social differentiation.

By the term "special language" we mean a language which is employed only by groups of individuals placed in special circumstances. The language of the law is a case in point. In the exercise of their profession lawyers employ a language very far removed from that of everyday speech; it is a special legal language. Another example can be found in ecclesiastical language. A special language is often used in addressing the Deity, just as Latin is used by the priests of the Roman Church. Religious phraseology must be counted among the special languages. Finally, all forms of slang are special languages. Students, artisans, and thieves all use a language of their own. These are so many special languages defined as such by the fact that they differ from the current language, and serve as a more or less secret means of communication between a limited number of individuals. They all have this in common, that theirs is a special speech in relation to the same common language; and when their structure is examined they are found to be the outcome of a common tendency to adapt the language to the functions of a particular group.

Some of these special languages are entirely different from the ordinary tongue—Latin, for example, which scholars have long used for international communication. They chose, as a special language in which to communicate with each other, a dead language ; Catholic priests have done the same for the language in which they address the Deity. Sanskrit, another dead language, has remained in India the language of the Pandits, that is to say, the literary class. As examples of liturgical languages differing from the living tongue, we might cite Greek, Old Slavonic, Armenian, or better still, Coptic, preserved as a religious tongue by people who normally speak a language of an altogether different family—Arabic. This is explained by particular circumstances : in the case of the scholar's Latin, the need for being understood in a number of different countries ; and in the case of religious languages by obedience to tradition, still more by the necessity for distinguishing between sacred and profane (see p. 255).

In general, special languages are developed from the common stock of some living language. Some of them, however, are as dead as Latin ; the language of the courts, for example, in which every term has acquired a definite connotation which lawyers must learn and to which they must conform exactly. At bottom, this is only a technical language, like that which the physician uses when drawing up a medical report, or which scientists in general employ for scientific matters. Technical languages are the outcome of the necessity for giving names to certain objects or ideas which have none in common usage ; but they also respond to the desire for greater " scientific precision " —that is to say, for giving very unambiguous terms to objects which ordinary language also describes quite adequately. Sometimes special words are invented, but sometimes the words in the ordinary tongue are employed with a special meaning—as, for example, the terms " mass ", " velocity ", " force ", employed by physicists. In this respect, technical languages belong to the order of *slang*.[1]

The word slang is nowadays a very vague term. In reality it is only another name for special language, and there are as many kinds of slang as there are specialized groups. Slang is characterized by its infinite variety : it is constantly being

[1] Cf. for slang, F. Michel, *Études de philologie comparée sur l'argot*, Paris, 1856 ; L. Sainéan, **CXIX**, and the works of Marcel Schwob and M. Dauzat.

modified, according to circumstances and places. Every social group, every trade or profession, has its slang. There is a school-boy slang which differs with each school, and sometimes with each form; a soldiers' slang, which likewise differs with each arm and is not always the same in each military station; dressmakers and laundresses, miners and sailors, all have their special slang.

And finally there is the "thieves' jargon". It was in connexion with the French variety, that the word "argot" first came into use. Until the beginning of the nineteenth century, there existed in France a veritable criminal guild, which had a special language, determined by convention and maintained by the will of every member. This was "argot", previously known as *jargon*, for originally the two words were one. It has been variously called *cant* in English (more usually now, jargon, lingo, or slang, cant having almost lost this meaning within the last thirty years, and being generally understood only in the sense of hypocritical speech), *Rotwelsch* or *Gaunersprache* in German, *furbesche* in Italian, *germania* in Spanish, *calão* in Portuguese, *smechereasca* in Rumanian, etc. Students of slang still frequently base their study upon the language of criminals. But nothing is less clearly defined, for in these days criminals no longer form a close corporation whose members all speak alike. The people who speak slang are from every social stratum, and what is called the criminal world comprises representatives of every district, class, and environment. When criminals combine it is in small independent groups according to some temporary necessity, and they recognize no leader who can impose his will upon them like another roi de Thunes or grand Coesre. They cannot be distinguished externally, and they mix with society like anyone else, although they themselves live in the borderland of respectable society. Under these conditions, how could a sharply-defined criminal language persist?

Slang owes its character chiefly to a difference in vocabulary. It is, in fact, a specialization of the common language, and as it exists only by contrast to this common language, the relation between the two must of necessity be constantly felt whenever slang is used. Any phonetic or morphological distortion, even in the slightest degree, would result in breaking the bond which unites slang to the common language from which it has sprung.

Moreover, morphology and phonetics constitute systems which, when tampered with, are no longer quite the same systems. Slang cannot harm them. Doubtless it does happen that certain habits of pronunciation are used in slang and contribute to its characteristic peculiarities. Thus the argot of the Parisian faubourgs possess certain characteristics which suffice to reveal the social rank of the people who speak it. But here we must distinguish between two things that are different. The natural pronunciation of the Parisian faubourgs is not the normal French pronunciation. These districts have their own phonetics, independent of the vocabulary. One may hear workmen speaking excellent French with the peculiar intonation of the faubourgs, and, conversely, society people using a slang vocabulary with the most cultivated pronunciation. When the pronunciation of the faubourgs is found together with slang vocabulary in the same speaker, it is merely a fortuitous association of two independent characters.

Hence we may reduce the special characteristics of slang to vocabulary alone ; but we have still to explain how these differences of vocabulary came about. The simplest process consists in the special use of the words of the ordinary vocabulary. We have already remarked that a general term like *travail*, *ouvrage*, *opération*, invariably takes on a special meaning in the mouths of different people according to the occupation to which these words refer. This phenomenon of semantic specialization (v. p. 201) lies at the very base of slang.

Metaphor is one of the favourite devices of slang, and the employment of a proper noun as a common noun is another. These processes are both exemplified in ordinary language (v. p. 227) from which slang is not to be distinguished in this respect. It is only in the application of the process that there is perhaps some distinction. Indeed, metaphor and metonomy are used with special frequency in slang ; but as they are wanted solely for the purpose of emphasizing and maintaining the differences between slang and the ordinary tongue, these figures of speech are quickly worn out, and have to be renewed. It is not astonishing, therefore, that slang should wear out its expressions more rapidly than any other kind of language. Frequently, likewise, these creations are both conscious and accidental. Here we come upon the prin-

cipal characteristic difference between slang and ordinary language. Although in principle and structure slang is a natural language, it nevertheless borders upon artificial speech and is fed at will by individual creations. The superiority of one member of a group suggests to the others an appellation which results from the special circumstances of the life of the group and thus individual fantasy contributes toward the creation of new words.

This, however, is not enough to explain the matter entirely. The processes of normal language, even when strengthened by the particular activity of individuals, do not furnish slang with the constant supply of small change in new words which it requires. It is then that foreign vocabularies are laid under contribution. We must understand the word "foreign" here in a broad sense, as denoting all that does not form part of the common language upon which slang lives. Thus local forms of speech spread over a considerable area, as well as dialects and sub-dialects which in their way are minor "common languages" subordinate to the general language of the country, and even foreign languages spoken in neighbouring countries may all contribute to the formation and renewal of slang. *Rotwelsch*, for example, is full of Yiddish words, and in *germania* there is a very important Gipsy element. *Smechereasca* mixes with Rumanian, Magyar, Russian, Yiddish, German, and Gipsy elements; in English *slang* (formerly known as *cant*), Irish words like *twig* "to understand" (Irish *tuigim* "I understand") are occasionally encountered. The argot of French students at the *Ecole Polytechnique* contains the German word *Schicksal* "fate, chance".[1] In general, French argot contains very few foreign terms (Arabic, Gipsy, Yiddish); its chief stock is borrowed from indigenous elements, but the provincial tongues are as well represented as the mother tongue.[2]

The result of this variety of elements that goes to make up slang is that a number of archaic elements are to be found in it. In fact, once semantic specialization or merely borrowing has introduced a certain word into slang, tradition retains it, often long after the current language has lost it. For example, it is somewhat surprising to find that the Old Germanic word

[1] Marcel Cohen, **VI**, vol. xv, p. 170.

[2] Cf. an interesting study on Breton argot by M. Ernault, **VIII**, vol. xiv, p. 267.

lütt "little" is still used in *Rotwelsch* in place of *klein*, or that the verb *occire*, which disappeared from the ordinary French several centuries ago, still lives in argot, as a substitute for *tuer* to kill. This is an archaism, though we often find apparent archaisms which in reality are merely the result of recent borrowing from literary texts, and at times it is difficult to distinguish between the two processes.

Borrowing from book-language is frequently an individual act; it belongs to the artificial processes of slang formation. These processes vary considerably. They consist, for example, in the distortion of the outward appearance of words; as when a slang suffix is substituted for one belonging to the ordinary language. This happens in French argot when *épicier* is changed into *epismar* and *Auvergnat* into *Auverpin*, or when *Rotwelsch* changes *Kaufmann* into *Kofmich*. Other mutilations are merely extensions of regular phonetic changes. The reasons given on p. 57 to explain the exaggerations of phonetic transformations, have also their application in slang. It is in slang especially that the speaker permits himself to pronounce words in an abbreviated form. He addresses himself to a limited number of listeners who are quite prepared to understand him and already have a previous understanding with him. As a result we have a large number of syncopations and elisions, simplifications, apocopes, and phonetic irregularities which contribute toward rendering slang incomprehensible to the uninitiated. At the same time, dissimilation, assimilation, and metathesis find in spoken slang a soil fully prepared to receive them, where no tyrannical rules forbid their propagation. Lastly, artificial mutilations take place quite independently of normal linguistic conditions. Examples of these can be seen in *loucherbème* and *javanais*. The first consists in transferring the first letter to the end of the word, replacing the former by the letter *l* and completing the distorted word by a slang suffix: *javanais* consists in inserting certain syllables in words (*ar*, *oc*, *al*, *em*, etc., but more especially *av* or *va*), and this is doubtless the derivation of the term *javanais*.

Loucherbème is not very old, and certainly dates back no farther than the beginning of the nineteenth century; the *javanais* of the Paris slums is, apparently, younger still. But the process by which both these forms of argot have been

obtained is much older than they, and must have been employed at all times and in all places where people desired to transform their language. In the Punjab to-day there is a tribe of thieves who have created a special language by inserting the syllable *ma* into the ordinary Punjabi words.[1] It is a very simple process within reach of all. We saw, p. 229, that really new words are not invented so easily. When we have no more opportunities of drawing at our discretion upon neighbouring vocabularies for new words, we can always modify existing words upon some regular principle. This process of deformation is used in a considerable number of slang languages. French children often employ *javanais* in the school, and English boys and girls use its numerous English equivalents, while the same process has been observed at work in the scholastic institutions of Germanic and Slavonic countries.

That enigmatic grammarian whom we know only under the ambitious pseudonym of Virgilius Maro, and who probably lived in the fifth century A.D., seems to have been the inventor of a special language, which was long held in high repute in the Irish Schools. This language consisted in a distortion of current words by the reduplication, amputation, or displacement of syllables. In the course of time, it became transformed and gave birth to a composite language called in Irish *berba na filed* " the poet's language ". This is a slang containing a medley of words from the Latin, Greek and Hebrew, as well as native words, some out of use and taken from archaic texts, and lastly, words of common usage turned upside down or otherwise distorted. This language, of which we still have some samples, often difficult to interpret, was preserved by tradition in the schools as a secret language. We do not know to what extent it was spoken. Possibly it was only a system of writing, like the language of sorcerers and talisman makers.

The magic formulæ which we find chiefly in the tombs of Greece, Italy, and Africa, written upon tablets of lead, often show the application of the same principles—the use of foreign words, and the mutilation of native ones.[2] But in this case the motive is different ; it is a question of establishing some means of communication with the other world, and the wording of

[1] T. G. Bailey, " On the secret words of the Cûlûâs " (*Proceedings of the Asiatic Society of Bengal*, 1902).

[2] Audollent, *Defixionum tabellæ*, Paris, 1904.

the text is affected by considerations which have nothing to do with language as such.

This last point leads us to say a word on the question of special languages born from mystic considerations.

Travellers who have visited uncivilized countries and ethnographers who have co-ordinated the various accounts given by travellers, all testify to the importance which special languages have in uncivilized societies. Different vocabularies arise for religious reasons within the same language, whose differences lie in the manner of using them, and in the things for which they are used. In fact, among these peoples " the domain of the sacred is much greater than with us . . . there is hardly a social activity which does not participate at some time or other in magico-religious rites ; and each time this happens, it is necessary in theory to employ a special language. . . . As a rule, these special languages, temporarily employed, are fragmentary in character, or at least, except sporadically, they consist entirely of a greater or lesser number of ordinary terms that are forbidden, that is to say, of linguistic taboos ".[1] Everything that presents a sacred character, including, needless to say, the divinity under every shape and form, and also the chiefs, the dead, and all objects consecrated to them, animals representing them, etc., calls for the use of a special language. It is also employed for acts which have in general a sacred character, such as fishing, hunting, navigation, war, or even for certain particular acts whose sacred character is derived from something of local or temporary import. In Indonesia, camphor and gold seekers both have a special language.

One of the more common specializations results from sex-distinction. Women do not employ the same language as men ; even when they understand the words the men use, they have not the right to pronounce them. Hence there are two different vocabularies, exactly parallel, each object having two names according to the sex of the speaker. Among the Caribs, for example, the men speak Carib but the women speak Arowak.[2] Sometimes differences in language indicate a difference in social

[1] Van Gennep, **XIV** (1908), p. 327 and ff. ; R. Lasch, *Mitteil. der anthropol. Gesellsch.*, Wien (1907).

[2] L. Adam, *Du parler des hommes et du parler des femmes dans la langue caraïbe*, Paris, 1879.

rank. Among the natives of Java, a superior speaks to his inferior in Ngoko, but the inferior answers in Kromo.[1]

Sometimes, moreover, people belonging to different generations employ different languages. Among the Masai in East Africa, the masculine population is divided according to age into two classes, each of which has strict rules forbidding the use of certain foods and consequently the use of certain words.[2] The older men may not touch either the tail or the head of a slain animal, and must employ special terms to denote the head or tail. Conversely, the younger men are not allowed to eat pumpkins. And it is a very serious offence when either forgets and mentions in the presence of the other one of the actions which are forbidden to the latter. These rules are due to religious considerations, for the two groups are regarded as the two halves of a mystic unity embracing all the male individuals of the tribe. The difference between the two halves is marked by different practices, which inevitably entail differences in vocabulary.

This belongs indirectly to the category of initiation rites, so important among uncivilized peoples. There are special rites accompanying the passage from certain ages and mystic groups into others. It is a matter of separating the novice from his former state, in order that he may graduate into the new one. Hence the employment of secret languages, which are maintained more or less in their entirety after the initiate takes his place in general society.

The opposition of two different worlds, one real and the other mystic, or one good and the other bad, constitutes the foundation of quite a number of religions. This dualism often creates a division in the language. There are in the Avesta some twenty words which have a double vocabulary, one or other of which is used according to whether Ormuzd, the principle of good, or Ahriman, the principle of evil, is being spoken of.[3] The same act may have a double implication, one real, the other mystical, and when it enters the domain of magic it is denoted by a new and distinct word. The sacrifice offered

[1] Von der Gabelentz, **CLXIII**, p. 244.
[2] Capit. Merker, *Die Masaï, Ethnographische Monographie eines ostafrikanischen Semitenvolkes* (1910), p. 71; quoted by S. Feist, **XXVI**, vol. xxxvii, p. 113.
[3] See J. Darmesteter, **LXIV**.

by the priest has for sole object the passage from one world to the other.[1] In all lands, moreover, sacrifice involves the use of a special language, which we call a religious language. Thus the religious languages of modern Europe have magic as their original basis, and take us back to the practices and beliefs of uncivilized peoples. And yet, in this case as in every other, we must take care not to exaggerate the differences between civilized and uncivilized people. The causes which determine the creation of special languages are fundamentally identical among both. Our most highly cultivated languages present certain specialistic data, that we should readily attribute to a mystical mentality were we to encounter them on the Zambesi or in Sumatra. Verbal taboo, which has proved so important in the formation of all the vocabularies of Europe, is a purely mystic process. How many people to-day avoid mentioning certain words for fear of bringing to pass the misfortune which the word denotes. *Absit omen*! is the formula of a barbarian, and the influence attributed to names of things is but a survival of a superstitious mentality. We have even in these days an example of special dialect that goes even further than those restricted to women. Among the Jews of Germany who speak Yiddish, there exist two different vocabularies to distinguish when things are Jewish and when they are not ;[2] and there are also distinctions depending upon sex ; thus, in salutations the man speaks or answers in Hebrew, but the woman always in German.

It may be questioned, however, whether the special languages still used to-day in uncivilized countries by those who follow special avocations constitute proof of the user's superstition of mind. Just as among the Malays gold and camphor seekers have their special languages, so we have special forms of slang peculiar to our professions. The language of the Breton tailors (*langaj kéméner*) has been studied ;[3] and in Ireland and Scotland those used by coppersmiths (*shelta*) and other artisans.[4] Like the *berla na filed*, these are perhaps survivals of an ancient

[1] Hubert and Mauss, "Essai sur la nature et la fonction du sacrifice," in **LXXXV**, pp. 7–130.
[2] Ernest Lévy, **VI**, vol. xviii, p. 333.
[3] Ernault, **VIII**, vols. xxvi and xxvii.
[4] See R. I. Best, *Bibliography of Irish Philology and Literature*, Dublin, 1913, p. 50.

mystic speech ; but their preservation can be explained by the needs and traditions of a particular group whose occupations have set them apart from their fellow men.

Special languages are the result of social divisions. In principle, therefore, they are as natural as dialects, but they are always born of the very heart of a common language, from which they usually continue to draw their sustenance.

CHAPTER III

Standard or Common Languages

WE indicated at the end of the first chapter of this Part (p. 233) to what extent standardization of language is a social necessity. If society did not react against linguistic disintegration, the world would be one welter of dialects growing ever more and more completely differentiated. But the people who speak a language always tend to preserve it intact ; furthermore, the conversational interchanges which are always taking place between members of the same social group involve the standardization of a language. From this process dialects evolve, but also *standard languages* which are superposed on them.

Needless to say, there are certain differences between the formation of a standard language and that of a dialect. Dialects arise spontaneously through the natural interplay of linguistic acts. Wherever in contiguous areas the current speech shows common peculiarities and a general resemblance apparent to the speakers, there is dialect. Dialects are more or less capable of definition. We have pointed out that the combined forces of all the linguistic criteria could never absolutely fix their limits. There is always something arbitrary about the linguist's selection of phenomena for establishing dialectal divisions on his map. It is the same with dialects as with those natural regions into which a country is divided : [1] when they do not serve as a basis for political divisions, their boundaries must ever remain indeterminate. The inhabitants of Seine-et-Marne to-day still speak the Brie, Gâtinais and Montois. But these different names, which do correspond, perhaps, to certain geographical characters, do not represent any strictly defined region to-day ; and even if there was a time when we might have spoken of the boundaries of the county of Brie, Montois at least was never anything but a geographical expression.

A dialect is all the more closely defined when it coincides with a political division, and its boundary will often subsist

[1] L. Gallois, *Régions naturelles et noms de pays*, Paris (1908).

long after the circumstances which fixed it.[1] For example, we find that in many regions of present-day Germany the isoglossal boundary lines coincide at certain points where they also coincide with the political frontiers anterior to 1789. These frontiers generally date from the sixteenth and even the fifteenth centuries; they were also religious frontiers, so that the influence of religion was added to that of politics in keeping these dialects clear-cut. It is the same in Brittany, where the boundaries of the dialects of Léon, Cornouailles, and Tréguier, still quite evident at many points, coincide with the old religious and political division of the country. It is striking to find, for instance, that the dialect of Tréguier is separated from that of Léon by the Morlaix River, which was formerly the boundary between the two bishoprics, and, accordingly, that the town of Morlaix, which bestrides its river, is cut into two from the linguistic view-point. This does not mean that the people on one side of the stream do not understand those on the other. But there are a certain number of linguistic peculiarities whose common area ends precisely at the same point; and, as in the case of the German dialects, the isoglossal lines which coincide with each other also coincide with the old administrative divisions.

Nevertheless, however important these political or economic factors may be, dialect is before all a linguistic entity. Even when we have made full allowance for outside influences in the building up of dialects, the fact remains that they are based mainly upon a natural development of the elements of language.

This is not the case with the mean or standard language common to all areas using the dialects derived from it. This is always defined by circumstances external to the language itself. It may be due either to the extension of an organized political power, to the influence of a predominant social class, or to the supremacy of a literature. Whatever may be its recognized origin, there are always political, social, or economic reasons which contribute to its preservation. "Civilization alone can spread a language over great masses of people." [2] And when the common language becomes differentiated and broken into several parts, it is because the social bonds which maintained

[1] L. Febvre, "Histoire et dialectologie," in the *Revue de Synthèse historique*, vol. xii, p. 249.
[2] E. Renan, **CXI**, p. 101.

it intact have become relaxed. We must therefore make a separate study of the formation of standard or common languages, and show by historical examples to what causes their birth, prosperity, and decadence are due.

At the base of every standard or common language there is some other language. This has been adopted by individuals of different speech. Historical influences explain the predominance of the language taken as the base and also provide the reason for its having spread over the areas of local speech. The philologist must first, however, decide which this language is.

Special conditions in each country determine which it is; each of the great standard languages, ancient or modern, has been created in a particular way. In some cases it is a dialect, that is, the language of a given district, which has spread to neighbouring districts and become the common or standard language. This was the case in ancient Greece when the Hellenistic *κοινή* was formed in Alexandrian times. The *κοινή* was in essence the Attic dialect. Until the fifth century, this dialect was merely " a local speech, belonging to an isolated region which attracted few strangers; its population, thoroughly rural in character, was relatively homogeneous ".[1] Common languages had formerly existed in Greece, and especially in the colonies. After its extension along the shores of Asia Minor, Ionic became the standard language, and is known to us through its illustrious representative Herodotus. And although we have the evidence of historians that a certain number of different local tongues existed in the Dodecapolis, a standard language co-extensive with these local forms of speech was also used. Political circumstances, however, did not permit the standard Ionic speech to attain the same importance as was achieved later by the Attic speech. Thanks to an extraordinary combination of complex causes the Attic speech came to be the language common to the entire Hellenic world during a whole century, between the end of the Persian wars and the formation of the Macedonian Empire. First among the causes which conspired to assure this predominance to the Attic dialect was the political rôle which devolved upon Athens after the downfall of

[1] Meillet, **XCIII**, pp. 243–4. Cf. Kretschmer, **CLXXVII**; Thumb, **CCXIII**; and Hoffmann, **CLXVIII**.

the empire of the Achaemenidae. But the penetrating force of the Attic was augmented by the renown of its poets and artists. It was as a political, artistic, and literary centre that Athens came to have the honour of establishing that standard language which from the fourth century B.C. to the ninth A.D. served as the medium for the expression of thought for Greeks everywhere. This language was an outgrowth from the Attic dialect as it was spoken within the limits of that district; it was only an adaptation of the Attic dialect to the populations who spoke different dialects or even different languages.

In ancient Italy the conditions were somewhat different.[1] Latin, which became the standard language of Italy, and finally of the whole of the Western world, was essentially the language of Rome, that is, of a city as contrasted with the dialects of the country outside. The *sermo urbanus* began by stifling the *sermo rusticus* before supplanting in their own territory neighbouring dialects such as the Sabine, the Marsian and the other languages of Italy, Oscan, Umbrian, Etruscan, Celtic, and Greek. Here we are confronted with the importance of the city as a political capital.

Standard French likewise radiated from the capital of the country. The political importance of Paris and the country immediately surrounding it suffices to explain why the dialect of the Île-de-France—"French"—was adopted by the neighbouring provinces in proportion as they became united to the kingdom, and why it finally became an instrument for intellectual exchange from Dunkirk to Perpignan, and from Brest to Chamonix. The French of the Île-de-France was not only superposed on the dialects of the same linguistic family, derived like itself from Latin, but it also served as a standard or common language for the Flemings and the Bretons, whose native tongues were Germanic or Celtic. In the south-east of France it penetrated as a common language the Basque territory. It was not even confined within the political frontiers of France, since certain parts of Belgium and Switzerland are linguistically French, not to mention the colonies, old or new, which spread the use of French overseas.[2] The history of this common or mean French speech, its formation and its

[1] Stolz, **CCVIII.**

[2] See *La langue française dans le monde* (published by the Alliance Française), Paris, 1900.

geographical extension, is strictly bound up with the political, economic, and social history of the country; it is impossible to understand the one without a knowledge of the other. It was in the capital, however, that French originated, and from a certain class within this capital—the bourgeoisie. This fact has been verified in masterly fashion by M. Brunot.[1] The common language, as it became fixed in the seventeenth century, is the language of the Parisian bourgeoisie—of the "town". The court accepted it, then the provinces; and the great writers, by using it, gave to it the power of establishing itself once for all. The influence of dialect is scarcely visible.

Standard Spanish became fixed much earlier than French. At the time of the Moorish conquest (in A.D. 711) the peninsula must have contained three large highly differentiated dialectal groups: the Galician in the west, Catalan in the east, and a central group spreading over a wide area. It was from a northern dialect belonging to this domain—Old Castilian, spoken near the Basque provinces—that standard Spanish was derived. For reasons arising out of Spanish political history, Castilian spread toward the south fanwise, gradually overriding the other dialects of the central group. Nevertheless both to the right and left of the Castilian block, representatives of these dialects have persisted, even to the present day, in the Leon and Aragon patois, between which there are some curious resemblances. Castilian, thanks to King Alfonso X (1252–84), who was for Spain what Dante was shortly to become for Italy, became a literary language in the thirteenth century. Standard Spanish is thus the result of the political and literary supremacy of Castile. This supremacy did not extend to Portugal, which formed an independent state from the close of the eleventh century. The Portuguese dialects always belonged to the old western group. Thus old Portuguese is homogeneous with Galician. However, the importance of Lisbon as the capital in the sixteenth century, and the influence of the great poet Camoens (1525–80) gave the supremacy to the central dialect of the country, which became the standard of literary Portuguese. As for the dialect spoken to-day in Galicia, it gives the impression of old Portuguese arrested in its development; it is also deeply tinged with Spanish.[2]

[1] **LII**, vol. iii. See also Rosset, **CXII.**

[2] For the facts contained in this paragraph I am indebted to M. Amerigo Castro. For Portuguese, cf. Leite de Vasconcellos, **CXXVII.**

As compared with French and Spanish, the standard English speech shows traces of considerable influence exercised by the various dialects, from the very beginning of its history.[1] This is due to the fact that the city of London, where " the King's English " took form, is situated at the meeting-point of several dialects. Furthermore, it so happened that at the very moment when the standard language was in the process of formation, the city of London suddenly began to grow, gathering to itself immigrants from every provincial area, who mingled with the old population. This immigration brought dialectal influences to bear so strongly upon the common language that in the seventeenth century the pronunciation of standard English, far from being stabilized, still admitted of numerous variations. Traces thereof can still be seen. This immigration from the provinces, however, had the additional effect of bringing about continual interchanges of population between the capital and the provinces ; and this proved extremely favourable to the spread of the common or standard form of the language. It is therefore to the importance of its capital that England owes the relative unity of its language, but in rather different conditions from those in which French was stabilized, and French is thus more thoroughly unified.

In our own time, standard languages have been created in the Balkan Peninsula. The future, no doubt, will modify them and extend their area. These also owe their standardization to the existence of capitals. The dialects of the Southern Serbs are very different from the written and spoken Serbian of Belgrade,[2] which has the accent in different places, a greatly simplified system of inflections, and no quantity. In many respects, these dialects are intermediate between Serbian and Bulgarian ; in practice, the dialectal boundary between the two languages is impossible to fix. Since the end of the Balkan wars, however, a common Serbian language has invaded and absorbed those southern dialects which are found within the political limits of the kingdom of Serbia. We are fairly well informed, as to the way in which the standard literary language, for example, was substituted for the dialect known as Ikavian.[3]

[1] W. Horn, **CLXIX** and **CLXX**; Morsbach, **CLXXXIII.**

[2] O. Broch, " Die Dialekte des südlichsten Serbiens," Vienna (1903) (*Schriften der Balkan-Commission*, Linguist., Abteilung, vol. iii).

[3] H. Hirt, " Der ikavische Dialekt im Königreiche Serbien " (**XXXIX.** *Phil. hist. Klasse*, t. 146, 1903).

The principal change consists in the replacing of the sound *i* by the group *iye*. Such a substitution is facilitated in Serbian by the existence of the family unit—the *zadruga*.[1] Obviously within each *zadruga* a single language must be spoken; but marriage was continually introducing into the *zadruga* women who were foreign to the district and who spoke different dialects. Thus, local speech had little chance of remaining intact, and the common language grew proportionately. The literary language thus became the standard language for all the Serbs of the Kingdom.

In Germany, where the capital is of very recent growth, and does not, moreover, exercise an uncontested supremacy over the whole country, the spread of the standard language was independent of political unity. Standard German is primarily a *written language* which owed its success to religious causes and its origin to the necessities of colonization.[2] The Reformation spread the German of Luther throughout the region of Lower Germany; already, at the end of the sixteenth century the only written language used in this area was a common literary language. Its spread was slower in the Catholic districts of southern Germany, and in Protestant Switzerland. But Luther himself only used an instrument which had been long since prepared. Since the beginning of the fourteenth, and even the thirteenth century, there had been a tendency in the Chancelleries of the municipalities and principalities of Germany to adopt a standard common language different from the regional dialects. The example was set by the imperial chancellery,[3] which attempted to avoid dialectal peculiarities, and to employ the same language in all the districts within its jurisdiction. This was evident during the reign of the Emperor Charles IV, in the fourteenth century. The language of the imperial chancellery gathered impetus from the fact that it was above all a colonizing language. Step by step, indeed, German was implanted in the Slavonic domain and substituted for the Slavonic languages. Thus standard German took shape in the colonized cities of eastern Germany, owed its literary importance to the Reformation,

[1] "Marriage is one of the constant human intermediaries between language and local history," Terracher, **CXXIV**, pp. x and 228.

[2] Kluge, **CLXXV** and **CLXXVI**; Gutjahr, *Die Anfänge der neuhochdeutschen Schriftsprache vor Luther*, Halle (1910).

[3] Socin, **CCVI**, pp. 164 and 203.

and became stabilized as a result of the discovery of printing, and so became the written language of the whole of cultured Germany.

The history of Russian is rather different.[1] Throughout the Middle Ages, the written language of Russia was the Slavonic used by the first translators of the Bible. This Slavonic, based upon the Slav speech of the South (round about Salonica) underwent a certain adaptation in Russia without, however, becoming identified with Russian itself. Although uneducated people sometimes wrote very much as they spoke, the literary language remained the Slavonic of the ecclesiastics. From the time of Peter the Great the language became free from this southern ecclesiastical Slavonic influence, and as had happened with the languages of western Europe, especially French and German, conformed to the speech of Central Russia, as it was spoken in the old capital, Moscow. In the course of the nineteenth century, it thus became a literary language, still containing traces of the southern Slavonic ecclesiastical use, but resting essentially upon the current spoken tongue.

Polish has been a literary tongue from the beginning of the fourteenth century, but it blossomed out in this respect during the sixteenth century in the region of Cracow (Little Poland). At the same time, this literary and standard Polish was not the language of that area; it came from the region of Posen and Gnesen (Great Poland), the ethnical cradle of the Poles in the tenth century. Thus, of the four great dialectal groups, Mazovian, Posnanian, Cracovian, and Ruthenian Polish,[2] it is the Posnanian which served as a basis for the common literary language. This language was developed in Little Poland and attained its full structural significance in Ruthenia, the eastern portion of this area—that is to say, in a partly colonized region, not belonging originally to ethnographic Poland.

Lastly, there are standard languages with a purely literary origin. This is the case, for example, with Italian,[3] which

[1] E. Budde, "Outline of Russian contemporary literary history, seventeenth to nineteenth centuries" (in Russian), forms the twelfth part of the *Enciklopedija slavjonskoj filologij*, Petrograd, 1908.

[2] See Casimir Nitsch, *Mowa ludu polskiego*, Cracow (1911).

[3] D'Ovidio, "Lingua e dialetto" (**XLI**, vol. i, pp. 564–83); G. Ascoli, "Il toscano e il linguaggio letterario degli Italiani" (**XLI**, vol. viii, pp. 121–8); Pio Rajna, "Origine della lingua italiana" (*Manuale della letteratura italiana*, by d'Ancona and Bacci, vol. i, 2nd ed. (1908), pp. 15–24).

became stabilized as the language common to geographical Italy at the beginning of the fourteenth century, thanks to the prestige and influence of writers such as Dante, Petrarch, and Boccaccio, at a period when the country had no political unity. Certainly, these great writers made use of the language spoken around them, whence the name *lingua toscana*, borne by literary Italian since Dante's day. This name, however, in no way implies that the Italian of literature grew out of the extension of a provincial dialect. The language which Dante raised to the rank of a literary tongue, and which was destined to become the common language of all Italy, is essentially the speech of a city—Florence—and the speech, moreover, of the upper classes of that city. The Tuscan dialect itself presents certain peculiarities which have never found their way into the literary language. For example, it changes the intervocalic *c* into a spirant, saying *fuoho* for *fuoco*, and *la hasa* for *la casa*. Nevertheless, it is only fair to say that several causes of a different order contributed to make Florence the *terra promessa* of the standard language common to all Italy. Apart from the fame of its writers and its importance as a literary centre, this city, situated between Bologna and Rome, was predestined to serve as a connecting link between the intellectual cities of Italy. Moreover, the dialect of Florence had certain intrinsic qualities which recommended it above all others for the rôle of a standard language. It was closer to the original Latin, and hence made it easy for every educated Italian to transpose his local dialect into the common language. Thus was prepared the triumph of the *lingua toscana*, which was complete when, in the fourteenth century, the Venetian humanist Bembo penned his works in it.

The method of formation of such standard languages as we have had under review naturally exercises its influence on the relation existing between these languages and dialects. When the standard language is itself only a dialect that circumstances have caused to prevail over other dialects in its vicinity, they are apt to be absorbed by the standard language. The dialect serving as a basis for the standard language is invested with an authority which is imposed upon the others. No doubt, it generally loses its outstanding peculiarities. Thus, the Attic dialect was robbed of some notable peculiarities when it became

the Hellenistic language. But the other dialects are condemned to lose their vitality rapidly in contact with the standard language. Unless special conditions reinforce this vitality by converting them into special or literary languages, dialects gradually lose their local boundaries and finally become absorbed in the standard language. In northern France there are practically no dialects left, and there no longer exists even that intermediate territory between the standard language and the local speech—*patois*. A native of Picardy to-day knows only two types of language; his village speech and standard French. He has learned the latter at school, and he meets with it every morning in his newspaper. The local manner of speech thus becomes more and more saturated with elements borrowed from the common language. If perchance certain elements borrowed from patois creep into the standard language, they must not on that account be considered as survivals of the old dialect, or as evidence of a new one in process of formation; they are merely phenomena resulting from a reflection of patois on the standard tongue. We must go back several centuries to find texts in the dialect of Picardy. It died on the day when those who spoke it lost the sense of the independence and dignity of dialect.

We are ill informed as to what took place in ancient Greece or Italy. It is probable, however, that the dialects there became more or less absorbed into the standard Greek and Latin. The Hellenistic κοινή is the basis of all the modern Greek dialects. Standardization once accomplished, a new division took place according to historical laws, but along different lines; and nothing can be discovered in the dialects of modern Greek corresponding to the old dialects antedating the formation of the κοινή. The local forms of speech must have impregnated themselves so thoroughly with the characters of the common language that doubtless they could no longer be recognized, except in certain details of pronunciation or features of the vocabulary. Even the inscriptions, close as they are to the spoken tongue, furnish no evidence of the survival of the dialects.[1]

In Italy, Latin absorbed a number of languages of which we know very little nowadays, and also dialects allied to that of Rome. The efforts of certain philologists have enabled us to

[1] Thumb, **CCXIII.**

sort out of the vocabulary, morphology, and phonetics of Latin certain dialectal features which may perhaps be retained to some extent in the dialects of modern Italy.[1]

Dialects contributed to the elaboration of a standard language in varying degrees. Those dialects most closely allied with the dialect serving as a basis for the standard language are naturally the first to disappear. This statement, which may sound trite, nevertheless has its importance in the study of language contacts (cf. p. 294). For example, there is a perceptible difference in the respective influences exercised upon English by Danish and Norman French.[2] The grammatical structure of English has been but little affected by the latter, whereas Danish stamped its impress deep upon it; the deterioration and simplification of the grammatical system were effected two centuries earlier in the regions principally occupied by the Danes than in the south of England, where the Normans settled. Apart from social and political relations—it should be noted that in England the Normans were relatively few in number, and always constituted a special caste—the reason for this marked difference lies in the degree of relationship existing between the languages in question. From the grammatical view-point, English and Danish possessed affinities which did not exist between English and Norman French.

Standard languages that are primarily written languages, such as German or Italian, are quite differently situated as regards their dialects. The norm represented by the standard language sets up no opposition to dialect, since no dialect tends to encroach upon any other. It is a question of two different languages which have been superposed one upon the other. The feeling of a unity greater than that of the local dialect, yet more limited than that of the standard language, subsists with little risk of interference throughout the country. Thus, in Piedmont or Lombardy, conversational language does not coincide with book language. The latter appears artificial and archaic; it is really a dead language without spontaneity and, as Ascoli says, without *sicurezza*.[3] In modern Germany,

[1] Cf. the study of G. Mohl, *Chronologie du Latin vulgaire*; of A. Ernout, **LXX**; and of de Ribezzo, "Reliquie italiche nei dialetti dell' Italia meridionale" (*Atti Accad. Arch. Lett. Bell. Arti, Napoli*, i, 1908).

[2] Jespersen, **CXXXIV**, pp. 170–3.

[3] Ascoli, **XLI**, vol. viii, p. 126.

likewise, we can still speak of dialects. They occupy an intermediate place between the local speech and the standard language. In popular sentiment they represent the language of fairly large districts that are more or less clearly defined. They have their place in literature and journalism. And the common language is affected by them because it has no uniform pronunciation, being spoken differently in each district. With the exception of the people who belong to the upper middle classes, who are especially well educated, every German's pronunciation of the standard language is more or less local. Standard German is written alike everywhere; but it is pronounced in such a variety of ways that an observer can easily tell where the speaker comes from. The differences observed here and there in the pronunciation of French provincials are insignificant in comparison with the German dialectic pronunciation.

However, we said that the demarcation between standard written German and local dialects is not absolute. In fact, as we might expect, there are continual exchanges between them, and they mutually penetrate one another. And the result of this inter-penetration is a weakening of dialectal characters; so much so, indeed, that we might well predict here, as in the preceding case, the gradual disappearance of dialect. In this competition between dialects and standard languages, however, we must take into account one essential factor of which we have as yet said nothing, and that is their relative stability.

To every standard language we might apply what M. Meillet says of the Greek κοινή: [1] "It is an ideal norm which became more and more archaic with time, further and further removed from the tendencies of current speech, and also an ever-renewed effort to adjust the natural tendencies in the development of the language towards this norm." The standard language "is not a stabilized language, nor one that evolves regularly. It is a language in which there is a kind of equilibrium, constantly variable, between stabilization and evolution". This equilibrium is not easy to maintain. When the common language extends over a very large area where there is likely to be continual fluctuation in the population, and where social classes intersect and mix together, it will inevitably be exposed

[1] **XCIII**, p. 263.

to compelling influences in the direction of change. If it yields and becomes modified, its end is already in sight, for nothing will be able to prevent its being modified in varying fashion and degree in the different regions where it is spoken. History offers many examples of such disintegration. But before this happens common languages resist modification for a long time, having in their favour political conditions and the influence of teaching establishments and administrative conservatism. And yet it may be that their best safeguard still lies in writing.

The only question to be discussed here with reference to written language—to which a special later chapter will be devoted—is the extent to which it effects the development of the common language. Written language always represents a tradition and conservative rules. Doubtless tradition may exist without writing. According to Cæsar, there existed among the Gauls a certain body of traditional laws which the Druids made their pupils commit to memory, thus ensuring their transmission from generation to generation. In India before the time when writing came into use, the religious texts were likewise transmitted orally without undergoing the least alteration. But it goes without saying that tradition gains added strength and resisting power when reinforced by writing.

We must not confound written and literary language. Although the two ideas sometimes coincide, there are cases in which they are antagonistic and contradictory to each other. Written language is often the expression of the standard language, while literary language is generally quite distinct from it. In many countries, men of letters, poets or story-tellers, formed a caste apart, with traditions, customs and privileges of their own ; their language, therefore, had all the characteristics of a special language, necessitating initiation, and imposing an apprenticeship to the craft. It might even happen that the rôle of the poet was partly religious, and certain literary languages are, at the same time, religious languages. Sanskrit, for example, preserved this character for a long time. In Greece, the peculiarities of the great lyric poems were no doubt due to the fact that they were based on such special religious languages. Even apart from all religious influences, there arose in many countries literary languages which were limited to certain very definite uses. The language

of the Greek epic is a type of such special literary languages, which took shape in the hands of the poets and became fixed once for all. Whoever in Greece sought inspiration from the epic muse used a language which corresponded in no way to any spoken tongue; both Apollonius of Rhodes and Quintus of Smyrna conformed to the Homeric tradition. Similarly, in Athens, there arose a convention of employing for the choral parts of the tragedy a fixed language tinged with Doric, but not fundamentally representative of any particular Dorian dialect. In India, also, there were literary languages with a more or less dialectal basis, which were employed only for certain kinds of literary work and by certain categories of poets. They were distinguished chiefly in being different from the standard language. The Malays, who do not speak an Indo-European tongue, employ as their literary medium a special language, the Kawi, full of Sanskrit elements.[1]

Quite apart, however, from those cases in which the literary language originates in a special language, we can easily understand the difference between the literary and the common language. In fact, the fundamental character of the standard language is to serve as the mean between the different tongues of the various peoples who use it. When such a language spreads throughout a district, the elements contributing to the creation of this mean becoming more and more numerous, the standard is inevitably lowered. Thus, despite the preponderating influence of the intellectual élite, the farther the standard language spreads, the more elements it borrows from the lower strata of the population. It rapidly becomes more and more lifeless, neutral, and colourless. It is then defined by its negative characteristics—weakness and triteness.

The man of letters, however, needs a personal instrument that will express his individuality and sensibility. "Language," M. Barrès has said,[2] "having been fashioned for common use, can express only what is coarse." Flaubert had two ways of writing, according to whether he was inditing an intimate letter or composing literary works in his own constrained style. "Artistic writing" is always a reaction against the standard language. To a certain extent, indeed, it is a slang, a literary

[1] Cf. the celebrated work of W. von Humboldt, *Ueber die Kawisprache auf der Insel Java*, Berlin, 1836–9.
[2] *Un homme libre*, pp. 87–8.

slang, which although it has many varieties and happens to be different in the case of the Parnassians, the symbolists or the decadents, is none the less a modification of current speech. These forms of slang, restricted to the literary holy of holies, and limited to a small number of initiates, do not concern us here. At most, we need but mention that they sometimes contribute to the common language certain words or turns of expression. But we must give closer attention to those cases in which the literary language is nothing other than the written tongue, and where both express the norm represented by the standard language.

The services rendered by our writers to the formation of the standard language are very great. It is to the combined efforts of authors and grammarians that Frenchmen owe the French they learn at school.[1] It is they who have forged this fine instrument for the general user, and taken care that no rust defiles it. The purification of the language, carried on for several centuries, may seem to be a work of trivial and pedantic quibbling, yet we have received so much benefit from this work that those who have done it deserve thanks. Thanks to the schoolmasters trained by the study of the best writers, all who use the language have at their disposal the most appropriate form for the expression of their thoughts, a language in which all the words have an exact meaning, and all the turns of speech are stabilized in their most delicate shades of meaning. In abolishing from the written language all that would shock natural feeling and good taste, in submitting it continually to rules of reason and decency, they have rendered it capable, as Bouhours has said, " of sustaining the strongest subjects and elevating the weakest." In a word, they have adapted it in advance to all the requirements of the mind. And the standard language has amply benefited from the work they have performed. It has gained in clearness, elegance, precision, variety, and, in the words of Rivarol, in " the integrity belonging to its genius ! "

The great writers have done for words what the kings formerly did for the coinage. They gave it whatever value they saw fit and decided the rate at which it was to be accepted by all. Something of their spirit has passed into modern

[1] See Brunot, **LVII**, vol. iv, p. 219 and ff. ; cf. also Alexis François, *La grammaire du purisme et l'Académie française au xviii siècle*, Paris (1905).

Frenchmen, and though they speak French, it is Pascal and La Rochefoucauld, La Bruyère and Bossuet, Montesquieu and Voltaire, who dictate the words they employ. Each individual, however little education he may have received, dips into such inexhaustible reservoirs, oft-times without suspecting it, when he talks. We have here in mind a certain contemporary French writer, whose language, properly speaking, is a reproduction of the French classics. He might well serve as a model to all those who attempt to write French, for he realizes with absolute perfection the ideal of French literature in its general and " common " form. In fact, we recognize in each of his works, in the use he makes of words, the way he combines them, even in the turn and rhythm of the sentences, the impress of our great masters. It requires a well-trained taste to appreciate such a subtle art. There is a pleasure, however, in being able to recognize and distinguish in this fine fabric, with its beautiful sheen, the importance of each of the strands woven into it. It is painful to think that perhaps a day will come when no one will be able to enjoy this pleasure, should education change its character and purpose, and cease to be concerned with the best ; then the public will no longer understand its value, but will trample on this delicate tissue and all its fine pastel-shades of meaning.

No doubt this is because all individual forms of art are beyond the reach of the crowd. But it is also because the creation of a " common " form, no matter how perfect, is but a moment in the history of a language, and further because a written language is always a little behind the spoken one.

The construction of a written language marks a stopping-place in the development of language. The forms crystallize and ossify, losing the elasticity natural to life. It is an illusion, however, to imagine that language can ever be arrested. What gives this impression of arrest is the fact that an artificial language is superposed on the natural one ; the discrepancy between the two, slight at first, becomes increasingly greater in the course of time, until eventually the contrast becomes so marked that there is a break. This creation of written language may be compared to the formation of a film of ice on the surface of a river. The ice borrows its substance from the river, it is indeed the actual water of the river itself—and yet it is not the river. A child, seeing the ice, thinks that the river

exists no more, that its course has been arrested. But this is only an illusion. Under the layer of ice the water continues to flow down to the plain. Should the ice break, one sees the water suddenly bubble up as it goes gushing and murmuring on its way. This is an image of the stream of language. The written tongue is the film of ice upon its waters ; the stream which still flows under the ice that imprisons it is the popular and natural language ; the cold which produces the ice and would fain restrain the flood, is the stabilizing action exerted by the grammarians and pedagogues ; and the sunbeam which gives language its liberty is the indomitable force of life, triumphing over rules and breaking the fetters of tradition.

Present-day French offers some justification for the above simile. The discrepancy between written and spoken language is ever growing greater ; neither the syntax nor the vocabulary is the same. Even the morphology presents differences : the past definite and the imperfect subjunctive are no longer used in the spoken tongue. Above all, the differences in vocabulary are obvious to all. Frenchmen are writing a dead language, dating back to the writers of the seventeenth century, which the contemporary writer, to whom we alluded above, represents to-day in its full perfection. But we speak in very different fashion. Our current vocabulary has changed since the seventeenth century.[1] The contrast between written and spoken words recalls the contrast between the plebian and aristocratic words ; we should hesitate to use in writing most of the words we employ in conversation. A man who speaks as he writes gives the impression of being artificial and abnormal. There are less and less of these people every day.

For a long time the upper classes preserved by tradition an archaic language, stimulated by the use of the written tongue, and it was only in the lower strata of the population that the growth of a spontaneous language, reviving the expressive elements of the language, was evident. To-day, the artificial language of the upper classes has disappeared, to the advantage of this popular tongue. All the purists deplore this " vulgarization " ; but their complaint is futile.[2] As a further consequence, the written tongue can be tainted by it ; the daily papers

[1] See F. Gohin, *Les transformations de la langue française pendant la deuxième moitié du xviii siècle* (1740–89), Paris (1903).

[2] See especially E. Deschanel, **LXVII**, and P. Stapfer, **CXXIII.**

hastily written by men often of no culture, are adopting more and more the expressions, turns, and even the forms of the spoken tongue. The solecism *je m'en rapelle*, the barbarous phrase *de façon à ce que* are in constant use. Many other "mistakes" no less crude can be found every day in these papers. In a Paris newspaper with a large circulation we can collect such expressions as *il demanda à ce que . . . avec cette brusquerie dont il ne se départ jamais . . . cette affaire ressort de la Préfecture de police . . . il ne se gêna pas pour l'agoniser de sottises . . . au point de vue pécunier . . . alors il s'enfuya*, etc. It will be readily noticed that in all this barbarous jargon there are numerous reminiscences of the written tongue. For example, *se départir de*, *ressortir à* are not phrases belonging to the spoken tongue ; the use of the past definite is one of the characteristic forms of the written language. The journalist who made these mistakes evidently intended and desired to use the written style of language but through lack of culture he has fashioned his written language from artificial and often false elements. In like manner Gregory of Tours, whose Latin swarms with mistakes due to the influence of the language spoken about him, still uses deponent verbs which had long since disappeared from the spoken tongue ; many of his deponent verbs do not exist in classical Latin.[1]

In defence of the good name of the French Press, however, we must recognize that in many large newspapers the language preserves a literary form, and that in them the correspondents and reporters apply the rules of written French without blundering. If the number of those newspapers is tending to diminish rather than increase, probably their level of correctness in writing French is proportionately becoming higher. There is a desire to react against the surrounding vulgarity, and solicitude for the purity of the language is thereby only strengthened. The Parisian Press thus includes newspapers which do not, in the proper sense of the term, all write the same language. One popular sheet uses scarcely any but spoken French in a more or less literary form. The language of another great daily journal would do justice to our best writers ; it is pure "literary French".

This literary French, however, is an acquired language ; so great is the discrepancy between it and the spoken tongue,

[1] M. Bonnet, **L**, p. 402.

that it often requires a long and arduous initiation and diligent practice. No one knows how long the custom will continue —I mean the custom of learning it. In any case, it can be foreseen that the fate of this literary French will be that of Latin. It will be preserved as a dead language, with its rules and vocabulary fixed once for all. The living language will continue to develop independently of it, as the Romance languages have done. At best, it will serve as a reservoir for enriching the vocabulary of the living tongue (cf. p. 228). There will be a literary French in contrast to vulgar French, as there are two kinds of Arabic in contrast to each other, and as the mandarin Chinese is opposed to the spoken languages of China.[1] Should a complete reform of orthography occur in France, the differences between these two French languages would startle everybody.

Naturally, the existence of literary French does not prevent the formation of a standard common language beneath its surface. Vulgar Latin, from which the Romance languages have sprung, was itself very different from the classical Latin which was still written in the time of Ausonius and Claudian. Alongside of the κοινή of the Hellenistic period was an artificial literary language whose vocabulary and even morphology were different.

In fact, it is possible to have several common languages superposed one upon the other.

In ancient India, Sanskrit, which was originally a religious language, became a standard literary tongue the moment a foreign dynasty sanctioned its employment for profane purposes. It is to-day a scholar's language, belonging both to the higher type of culture and to religion. Texts like the Mahâbhârata, or the Purânas, are still read and recited in the temples, just as Latin texts are still in use in the Catholic Church. But, needless to say, Sanskrit extends far beyond the domain of any Indian speech. Not only does it embrace the whole of the Peninsula of India, where it is used by peoples of very different race and language, but it has been exported by Brahmin and Buddhist missionaries as far afield as their missionary enterprises have taken them.

The existence of Sanskrit did not prevent other standard languages from arising. Long before the comparatively late

[1] Steinthal, **CCVII**, p. 53.

epoch (about the time of the Christian era) when Sanskrit developed into a literary language, younger tongues had been employed as common written languages. From about 250 B.C., King Asoka made of use these languages as official tongues in his inscriptions; other languages—Pali, for example—were used concurrently with Sanskrit as religious languages, and employed in writing Buddhist texts. Finally, in the drama, certain literary languages known as the Prakrits were normally used side by side with Sanskrit. This is somewhat reminiscent of the Greek lyric and epic languages.[1]

But underneath the aristocratic stability of these Prakrits[2] dialects and local tongues were forming at an early date, and are still in evidence. Some of them have assumed sufficient importance to serve literary needs — e.g. Hindi, Bengali, Marathi. India still has a common language, Hindustani, which properly speaking represents no real dialect.

We may close our chapter with this example of the Indian languages. It admirably illustrates the relations of standard or common languages with local dialects and with each other. It shows the fundamental difficulty of tracing the boundary between the elements which define them, or of deciding to what points they penetrate and react upon one another. The fact is that the formation of the common languages, as well as their development and disintegration, are regulated by historical causes outside the sphere of language, namely by the movements of civilization itself.

[1] F. Lacôte, *Essai sur Gunâdhya et la Bṛhatkathâ*, pp. 40–59.
[2] See Jules Bloch, **XLIX.**

CHAPTER IV

The Mutual Influence of Languages [1]

THE ideal of an uninterrupted, continuous development for language, sheltered from every outside influence, is scarcely ever realized. On the contrary, the mutual influence of neighbouring languages often plays a very important rôle in linguistic development.

Contact between languages is an historical necessity, and this inevitably leads to penetration. Under our very eyes and all around us there are areas where history has shuffled various peoples speaking different languages. In areas of this kind the extension of commerce and the necessity for communication demand the knowledge and common use of several languages. The Balkan peninsula has always been, and still is, a maze of languages, races, nationalities, and religions. Slavs, Greeks, Albanians, Rumanians, Turks, Jews, and Armenians form smaller or larger communities all mixed together in this area. There are Greeks in Thrace and Rumanians in Macedonia, Serbians in Albania, and Albanians in Greece. Nowhere in this region is it possible for political frontiers to coincide with racial or religious boundaries. Orthodox and Roman Christianity, Mohammedanism, and Judaism, all take their share of each different race and nationality. Various languages, which contribute more or less towards the preservation of these religions and nationalities, add an additional element of confusion : side by side we find Serbian and Bulgarian, Greek and Albanian, Rumanian and Turkish, Armenian, and lastly Spanish, spoken by the Jews, and this list includes only the larger groups of languages, disregarding the dialects.

A similar situation, somewhat exceptional in present-day Europe, must more often have been the rule in the course of history. Its consequences from the linguistic point of view are considerable. When two or more languages come into contact

[1] H. Schuchardt, **CCIII**, E. Windisch, *Zur Theorie der Mischsprachen und Lehnwörter* (**XL**, Leipzig (1897), pp. 101–26). For questions of principle, see Schuchardt, *Kreolische Studien*, **XXXIX** (1882–90), vols. 101–5, pp. 116 and 122 ; **XXXVIII**, vols. xii, xiii, pp. 476 and 508, and xv, pp. 88–123 ; and **XV**, vol. vi (1912). Sayce, **CXXXVIII**, vol. i, p. 219, gives some examples of mixed languages.

they are bound to react more or less upon one another. By virtue of this truth, certain philologists have even gone so far as to say that there is no language which is not in certain respects a mixed language. It is therefore necessary to examine the conditions under which linguistic contacts are brought about, and the results of such contacts on languages.

It would not be correct to represent the competition of two different idioms in contact as always manifesting itself in the same manner, for languages differ in their vitality and consequently some are more easily influenced than others.

In the case of two of the great languages of civilization, such as German and French, which are equal in vitality but differ considerably in structure, the competition to which they are exposed has no great effect on the languages themselves, and is carried on almost entirely in an economic field. The schools equip the protagonists for the fight, but it is in the give and take of life that victory is obtained. We hear of some Swiss village where German has driven out French ; another where the opposite has happened.[1] We will not discuss here the respective merits of languages. The inhabitants of these villages, being in possession of two instruments of equal substance and efficiency, have chosen the one which best answers their requirements. There will always be a tendency to displace the linguistic frontier according as economic relations are developed on this or that side of it. Practical interests alone rule in such circumstances and decide in favour of one or other language which might otherwise long remain in a state of equilibrium.

In addition to economic conditions, the political situation must be taken into account. Certain peoples, because of a feeling of patriotism or for the sake of showing their independence and opposing a neighbouring power, will uphold one particular language more strongly or even develop it in preference to another. It is obvious, for example, that the respective positions of Flemish and French in Belgium do not depend upon economic conditions alone, but also upon political motives which the philologist must take into account. During

[1] Zimmerli, *Die deutsch-französiche Sprachgrenze in der Schweiz* (part i, Göttingen dissertation, 1891 ; part ii, presented at Geneva and Basle, 1895 and 1899).

the past twenty years, a movement in Ireland has developed in favour of the revival of the old national tongue ; the origin of this movement was primarily political, and the chief motive was to free the people from the traditional enemy-speech—English. French was never so much in vogue in Alsace as during the annexation of that country to the German Empire. When it was part of France before 1871, and no linguistic constraint was imposed upon it, there was less reason for avoiding the use of local Germanic speech.

To a great extent, political reasons govern the rivalry of languages in the Balkan countries ; but religion has also played an important part. A language like Armenian owes its vitality, in large measure, to the fact that there is an independent Armenian Church in existence. The feeling of religious community increases the resisting power of a language. In 1688, in South Africa, the French Protestant refugees formed a fourth of the population of the Cape Colony ; but as Dutch was the official, the public, political, and religious language, French disappeared in the course of a century.

An equally powerful sentimental factor which has strengthened and maintained the integrity of many languages is the sense of prestige. No Roman citizen would ever have consented to learn one of those barbarian idioms, *quorum nomina uix est eloqui ore Romano* (Pomponius Mela, iii, 3) ; whilst even in Italy Latin stifled Etruscan, Oscan and Umbrian. So great was the prestige of the Latin language that barely a century after the conquest Gaul sent professors of oratory to Rome.

The determination of the Greeks not to sacrifice their language and adopt that of a conqueror whom they despised, preserved Greek throughout the ages. Turkish has never been able to supplant it, nor even to encroach upon it. The language of the oppressor was used for administrative necessities, but, as the Italians put it, never has the *lingua del cuore* given way to the *lingua del pane*.

The prestige of a language was usually justified by its worth. In the case of Greek this worth is considerable, and greatly transcends the intrinsic value of Turkish. Turkish, the language of the conquerors, is in no way a cultivated language, and cannot, therefore, successfully compete with Greek, which represents a culture a thousand times more venerable.

The importance of this intrinsic worth of a language is made manifest in many places. We could almost give the coefficient of each. Armenian has given way to Russian in Europe ; but Polish has resisted Russian in the west of the former empire of the Czars. They are two languages of equal strength, and in no respect is one inferior to the other. The genius of certain Indo-European, or Semitic, languages like Arabic for spreading is doubtless the result of complex causes, in which the intrinsic worth of the language itself has no mean part.

Isolated linguistic nuclei, thrown by chance into the midst of a population speaking a different language, can hardly be maintained intact, and are rapidly absorbed, no matter whether the environment into which they fall has a highly cultivated language or not. We know how difficult the diverse ethnic groups in the United States have found it to maintain the integrity of their languages alongside of English. Even German is seriously affected and is rapidly degenerating; a German-American has gradually reached the point of saying *Milch gleicht der Onkel nit* on the model of *Uncle does not like milk*.[1] About the middle of the eighteenth century, a Swabian colony settled in Spain, at the foot of the Sierra Morena. No trace of German can nowadays be found there other than in a few family names.[2] Similarly, the French spoken by the French refugees established in Germany, or in the Netherlands after the revocation of the Edict of Nantes, did not long withstand the influence of the speech by which it was surrounded. North of Frankfort there were a certain number of villages peopled by the French, who have remained there, but whose language to-day is the German of the neighbouring villages. On the other hand, German has survived from the fourteenth century onwards in the Gottschee valley in the very midst of a Slovenian area.[3] Economic conditions have doubtless favoured its retention, not to mention the additional prestige of patriotic opposition to Slav influence. But furthermore, from the cultural point of view, German is better equipped for spreading than Slovenian. The two languages were not equally matched. It is easy to understand, nevertheless, that Slovenian, used by

[1] Baumgartner, "Die deutsche Sprache in Amerika," quoted by Meillet, **IV, XVIII,** vol. cxvi.

[2] S. Feist, **XXVI,** vol. xxxvi, p. 344 n.

[3] Ad. Hauffen, *Die deutsche Sprachinsel Gottschee*, Graz (1895) ; H. Tschinkel, *Grammatik der Gottscheer Mundart*, Halle (1908).

the entire surrounding country, would not be influenced by the German of Gottschee. Yet the fact that German was able to maintain its position can be explained only by the inferiority of Slovenian from the point of view here taken.

Let us now consider the influence of a common or standard language, representing a highly organized culture, upon a group of local varieties of speech, possessing neither unity nor cohesion. A case of this kind is to be found in the relations between Breton and French in Brittany. Their rivalry bears no resemblance to that of French and German in Switzerland, where the two languages advance and recede like two armies facing each other and can so remain on guard for a long time. If one of them recoils or advances, however, a real displacement of the linguistic frontier takes place, and the people will definitely speak French or German. On the contrary, the linguistic frontier between Breton and French has hardly varied for several centuries, despite the incontestable progress made by French in Brittany.[1] We know that in the eleventh century A.D. Breton had scarcely a wider area than it occupies to-day within the limits of an almost straight line running from the north-west to the south-east, from Plouha, on the coast between Paimpol and Saint-Brieuc, to the mouth of the Vilaine, passing below Quintin and above Elven. To the right of this line, the French, or *gallot* dialects as they are called, have been almost alone in use for the last nine or ten centuries. The rivalry between the two languages presents itself under a special aspect. Let us resume our analogy of two confronting armies. Here there is no longer an army drawn up in battle array, nor is there any question of territory gained by the conquerors as they force the conquered to retreat. There is merely a continual passage of numerous elements from one language to the other: they are like deserters constantly going over to the opposite camp, which will eventually find itself with none of its native soldiers left. Here we have peaceful penetration rather than a war of conquest.

Let us now examine the situation to the west of the line traced above. All the Breton dialects, without exception, have been invaded by French. The language of the more complex civilization brought with it an influx of new words

[1] See Paul Sébillot, *Revue d'Ethnographie*, January, 1886, and J. Loth, **VIII,** vol. xxiv, p. 295, and xxviii, p. 374.

representing objects, ideas, and manners that were new. Ever since the end of the fifteenth century French literature and religion has been pouring French words into the Breton language, owing to the fact that French had naturally furnished the Bretons with models for their devotional books. Breton thus became confined more and more to rural or special uses. Military service and the teaching of French in the schools of the last fifty years have merely precipitated matters. At the same time, a change has taken place in the conditions of competition between the two languages.

For a long time the penetration of Breton by French was effected by a sort of unconscious endosmosis, Breton receiving internally a daily increasing number of French words without being aware that any difference was being effected. Most of the Bretons, however, continued to speak Breton even while introducing French words into their language. To-day, the great majority of the people are bilingual, and accordingly the competition between the two languages has been in a way transferred from the field of daily commerce to the mind of each individual speaker. This form of competition is equally deadly to Breton. The resources offered by a knowledge of French are infinitely superior to those which a knowledge of Breton alone provides for a speaker. The fact that French is the bourgeois language, employed exclusively by urban society, makes the country-girls as anxious to use it as they are to don the dress of these fashionable people. Further, intercourse between the Breton population and the bourgeoisie is becoming more and more frequent ; employees and domestic staff speak French with their employers. The development of the tourist traffic provides in the foreigner and the townsman a considerable source of revenue for the native, and it is therefore to his advantage to speak French, and indeed has become a necessity. The kind of life led also influences language. It is a fact that Breton is less spoken on the coast than in the interior, the explanation being that the seafaring folk naturally gain their livelihood away from their homes, and come in contact every day with people who speak another language, or at least a different dialect. Thus it behoves them to employ a common language like French for their business. Lastly, it is along the Breton coast that the principal lines of communication are to be found, on which the principal towns

are situated, and where, consequently, a constant exchange of business is carried on and tourists are continually coming and going.[1] French has thus become the common or standard language of Brittany, which Breton, with its many varieties of dialect, has never been. The struggle between French and Breton is thus ultimately traceable to economic causes, but it is the respective value of the two idioms as expressive media which determines the particular conditions of this struggle.

The final disappearance of Breton may, therefore, be predicted ; but we need be in no hurry to announce its disappearance prematurely. Breton is still very much alive. Quite apart from the devotion of the Bretons to their natural traditions, the considerable increase of population in Breton Brittany is a powerful factor in the maintenance of the language. On the other hand, the advantage of being bilingual may encourage the Bretons to speak Breton among themselves. It is a ready-made, special language, which serves to safeguard their independence. As a special language, Breton may be preserved for a long time among certain groups of workers in the sardine fisheries and canneries, and by the *paludiers* who work the salt-marshes, the slate workers and itinerant dealers ; and in this form, no one can possibly judge of the extent of its longevity. It will be able to renew and regenerate itself as long as there is a sufficiently large group to maintain its integrity as a special language.

Already, however, there are linguistic islands where Breton has disappeared. Thus the industrial workers of Hannebot speak nothing but French. Still more striking is the case of the peninsula of Guérande, where the real Breton Bretons are confined to the four hamlets of the commune of Batz, inhabited principally by salt-marsh workers. Even here Breton survives only in a precarious fashion. As the circle bounding the linguistic island becomes narrower and narrower till it is reduced to a minute area, the number of Breton-speaking individuals within the land also diminishes. Breton here is no longer used by people under fifty years of age, and children no longer understand their parents. We can see the time when

[1] Camille Vallaux, *La Basse-Bretagne*, Paris, 1907.

Breton will have definitely disappeared from this corner of the globe.

There are other languages which the same fate has befallen. Sorabian or Wendish, a Slavonic dialect, is to-day spoken in the Spreewald (Lausitz); but its sister-language Polabian, which was formerly spoken on the lower reaches of the Elbe, disappeared in the eighteenth century. To-day, there remains no trace of Prussian, a Baltic dialect, which still survived along the coast between Dantzig and Königsberg at the end of the sixteenth century. In England, the Celtic dialect, Cornish, which during the Middle Ages must have occupied the whole of the peninsula, including modern Devon, and joined up with the Welsh area across the Bristol Channel, has now practically disappeared. The last Cornish speaker, according to legend, was a woman named Dolly Pentreath, who died on 26th December, 1777, at St. Paul, near Penzance, at the age of one hundred and two. In the course of the nineteenth century, however, scraps of prayers, oaths, and phrases in Cornish could still be heard on the lips of peasants, and in 1875, there were still old men in Cornwall who could count up to 20 in Cornish.[1]

The question now arises of deciding what we mean when we say a language is dead, and the point at which we must consider it to be so.

Polabian has been absorbed into German, as Cornish into English, and present-day Breton is being gradually swallowed up by French. The capital of Cornwall, however, apart from old words or groups of Cornish words traditionally preserved, still retains many traces of the old native language. Similarly, the French spoken in Brittany and the English spoken in Ireland [2] betray the influence of Breton and Irish. Not only is the vocabulary more or less impregnated with words and expressions from the native language, but the latter reacts upon phonetics and even upon certain details of morphology, as for example, the word-order or the use of prepositions. Thus in Brittany in the French speech of the towns the accent is often placed in Breton fashion, and it also preserves the intensity it possessed in Breton. In the French spoken at Quimper the penultimate syllable is very strongly stressed; final

[1] **VIII**, vol. iii, p. 239.
[2] Joyce, *English as we speak it in Ireland*, London, 2nd edition (1910).

sonants are often changed into surds, especially the spirants (*une chemisse neuf, un fromache*, etc.), *faire* is used (in the sense of *ober* in Breton) as a true auxiliary (*pour faire le diable s'irriter=pour que le diable s'irrite*) ; the complement of the passive verb is introduced by the preposition *avec* (Bret. *gant*) : " tué *avec* son voisin " (instead of *par*), etc. Similarly the English spoken in Ireland preserves the old Irish usage in " *of* you " instead of " *from* you ", or " *against* " in the sense of " with ", or even " *what way* " in the sense of " How ? " " *on the head of* " in the sense of " in regard to ", translating the Irish *cad chaoi bh-fuil tu ?* and *ann a cheann*, or " it *does* be " to supply a lacuna in the English verb by a direct translation.

Thus, despite the fact that they themselves are impregnated with French and English elements, Breton and Irish both influence the invading language.

Will there ever be a time when Breton will have become so completely penetrated by French that it will seem to be only a belated dialect scarcely more specialized than the others—although presenting different characteristics ? If that were to be so, it would be impossible to date the moment at which a language could be called dead. There would always be relics of the vanished language in certain pronunciations, constructions, and above all isolated words, which, for example, would appear to be borrowed from Breton by the French when they were really survivals of the Breton language surrounded by borrowed French elements. We should no longer be able to tell whether, at a given moment, one was still using a form of Breton completely impregnated with French or if French containing survivals of Breton was being spoken. The Breton would have melted into the French as a piece of sugar melts in water. Doubtless, in such a case, we might say " Breton no longer exists ". But should we not be judging merely by appearances ? In fact, Breton will exist as long as the elements borrowed from it are used. But according to this reckoning the Gaulish variety of Celtic is not dead, since we have in our language some words here and there which are derived from it ; and over and above Latin we should still be speaking a certain number of other more or less known languages —all those, in fact, which in the course of ages have mingled with Latin and French. This interpretation of the facts is in accord with the theory according to which all languages are,

more or less, mixed languages. Another theory,[1] however, has it that on the contrary only one language is ever spoken at one time. The unity of the language spoken, with all the foreign elements analysis may discover in it, resides solely in the consciousness of the speaker. One language may quite easily melt into another, but the speaker passing from one to the other will none the less have to make a jump. There will always be a definite moment when he will be conscious of leaving the first and adopting the second. French is a Latin language and English a Germanic one, whatever external influences they may have undergone, by the fact that we have the sense of speaking the language of our ancestors, and because, if we trace back our speech to the Latin and common Germanic, we shall find a continuity of speakers who had the feeling and intention of transmitting a single identical language.

These are two quite contradictory theories. In order to attempt their reconciliation we must examine to what point the addition of foreign elements can compromise the essential unity of a language.

We will leave on one side the mutual borrowings of vocabulary that take place between languages. One characteristic of such borrowings is that they do not betoken that the user speaks or even knows the language from which they are taken. French sportsmen, whose language is full of English words, do not therefore know English, even if they pronounce these English words correctly. Thus vocabulary-borrowings, no matter how extensive they may be, remain in a certain sense outside the language.

There are other borrowings, however, which presuppose an intimate penetration by one linguistic system into another. These are the result of modelling one construction upon another, examples of which have already been given (see p. 206).

This superposition of a foreign construction on a natural language always results from the confusion of two verbal images, each corresponding to a different language, between which the speaker gets muddled. This confusion may occur in connexion with words as well as constructions, but the cause is always the same. When a first-form boy carelessly translates

[1] See Meillet, **XLII**, vol. xv, p. 403.

" give me my cow " by *da mihi mea vacca*, or " Peter is the king " by *Petrus est regem*, he has been misled by the fact that the English words " my cow " or " the king " may be either the subject or the object. This is exactly what occurs when, for the Italian *dammi la mia vacca*, a Slovenian says *dajma moja krava* (employing the nominative instead of the accusative). It is not a question of what we may call a confusion of case, in that the objective or subjective sense remains quite clear however the phrase may be turned, but rather is it a confusion of verbal images ; the speaker is talking Slovenian-Italian.[1] In a degree very little different, this is what happens when a Swiss writer like K. F. Meyer writes : *er ist kränker als du nicht denkst* " he is more ill than you think ". This mistake in German is due to the fact that the writer has in mind the negative conception of the comparative, common to French or Italian ; he is uniting the Romance habit of thought with the Germanic words.

This kind of mistake is very widespread. Even the construction of sentences is modelled on another language, and, accordingly, the word-order belonging to one sometimes passes into the adjacent language. Austrian-German, for example, under the influence of Slavonic, permits itself great freedom in word-order. The predicate or the object may be put at will at the beginning of the sentence : *guten Morgen wünsch' ich Ihnen* (I wish you good morning), *Recht hat er* (he is right), *gut ist's gegangen* (it went off well), etc., just as they may be said in Slavonic. In Bohemia one may hear : *Schwester haben wir ganz kleine* (we have quite small sisters) after the pattern of the Czech *sestru máme malickou*. In southern Austria, the influence of Slavonic is seen particularly in the position occupied by the negative : *nicht scheut er sich, ihn zu verleumden* (he is not ashamed to slander him), which is simply a literal translation of the Slovenian *ne se sramuje ga obrekovati*.

When a person habitually has to express himself in two different languages, he will unconsciously employ the idiom of one while speaking the other. In Welsh, the adjectival superlative is expressed by the use of *iawn* (=true) which corresponds to the English *very* : thus, *da iawn* is modelled on

[1] This example and those that follow are borrowed from Schuchardt, **CCIII**, p. 90.

very good. The custom of adding adverbs to verbs in order to modify their meaning is characteristic of the Germanic tongues. It is to be found in areas adjacent to English or German-speaking districts, and is due to the influence of these languages. In Welsh, *cael allan* is modelled on " to find out ", *dy fodi fyny* on " to come up ", *torri i lawr* on " to break down ", *rhoddi i fyny* on " to give up ". Similarly, in Gaelic, *cuiras* is a literal translation of " to put out ", *cuir air* " to put on ", etc. The Ladino spoken by the Grisons in Switzerland has *drizzer our* " to carry out " (Ger. *aus-richten*), *gnir avaunt* " to happen " (Ger. *vor-kommen*), or *vair aint* " to examine " (Ger. *ein-sehen*). We are here on the boundary line between vocabulary and morphology.

Certain literal renderings have a more direct influence upon morphology and would even seem to modify it. In certain local forms of Polish which come into contact with German there has arisen a kind of past indefinite with the auxiliary *to have* : *ja to mom sprzedané* " I have sold " (German *Ich habe verkauft*) instead of the correct Polish *sprzedatem*.[1]

In Italy, in the province of Campobasso, there is a Serbo-Croatian colony which came from Illyria about the fifteenth century, and which to-day still speaks a dialect of the Stokavian type. The use of the Italian article has been observed in an entirely Slavonic sentence : *da mi kàze le pute* " in order to show me the way ".

Slovenian has not only borrowed verbs, adverbs, particles, and nouns of number from the German, it has also developed an article, and frequently uses a passive on the German model.[2]

In the Portuguese of Mangalore in India, under the influence of English, there is a tendency to introduce the use of *s* with the apostrophe in order to denote possession. They began by saying *governor's casa* for " the governor's house ", then *governador's casa*, so that Portuguese has acquired an English morpheme.

We know that in different languages which are geographically contiguous, common phonetic peculiarities are often found (see p. 50). The same is true of the morphology. Thus, the Finnish use of the instrumental with the predicate arose in those Indo-European languages (Slavic and Baltic) which had been in

[1] Casimir Nitsch, *Mowa ludu polskiego*, Cracow (1911), p. 136.
[2] Feist, **XXVI**, vol. xxxvi, p. 323.

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contact with the Finnish languages.[1] This does not prevent Slavonic and Finnish from being morphologically different. But borrowings such as those quoted above compromise the integrity of the morphological system. When the borrowing is restricted to a limited number of turns of speech, these may pass as vocabulary borrowings, but if the borrowed construction serves as a mode and imprints upon the mind a definite verbal image, the language then really acquires a new morphological procedure.

The complete elimination of the earlier grammatical system may even come about. Let us say that Portuguese, for instance, adopts the construction *homem's casa* to the exclusion of *a casa do homem*. This will not alter the general morphological system of the language ; it is merely the matter of a new wheel or a single foreign piece of mechanism being introduced into the machine. But if the Portuguese morphological system were to undergo several modifications of this character, would there not come a time when the speaker would be unable to say whether he was speaking English or Portuguese ? Nor would the philological student be in better case.

For the answer to this question, we can gather valuable indications from the study of certain mixed languages. Such languages exist. Unfortunately, their existence is only vouched for under conditions which throw some doubt on the evidence. We have already cited the example of the speech of the Armenian gipsies, which, while preserving its Romany vocabulary, has completely adopted the Armenian morphological system and is consequently nothing more than Armenian with a Romany vocabulary. This example is confirmed by the Romany spoken in England. In early times, the Gipsies in England spoke pure Romany, later, while retaining their Romany vocabulary, they combined it with English morphemes. For example, a sentence like *komóve te jal adré mi Duvelésko kēri kana mervóa* " I wish to go to the house of God when I die ", has become in the later phases of the Gipsy language : " I'd *kom* to *jal adré mi Duvel*'s *ker* when *mandi mer's*." [2] The data in both cases are in agreement and must be explained in the same way. Their very oddity lays them open to the suspicion of being in part, at least, artificial. One would almost

[1] Meillet, **IV**, vol. xii, lxxvi.
[2] Pischel, cited by Schuchardt, **CCIII**, pp. 8–9.

suspect a cryptic motive to be at the back of both sets of facts—that the intention was to render the English or the Armenian incomprehensible by substituting Romany for Armenian or English words. In that case there would be no question of a Romany acquisition of the morphology of another language, but rather of a mutilation of English or Armenian by Romany. It would be a somewhat risky procedure to draw any definite conclusion from such data.

Mixed languages, however, are interesting because they are generally also examples of worn-out languages. And this fact enables us better to understand their mixed condition.

The reciprocal influences to which languages in contact are submitted, result in mutual loss. The necessity for finding some quick method for making themselves understood leads neighbouring peoples to make mutual sacrifices; to eliminate from their respective languages everything that is over-special and to preserve only those general features which they have in common with neighbouring languages.

At the present moment the Caucasus, like the Balkan Peninsula, presents a considerable mixture of languages. Tartar, Armenian, Georgian, Circassian, cover the country with a variety of dialects often so different from one another that philologists are unable to trace their origin. The principal cause for the rapid degeneration of these languages is precisely the influence of their neighbours. There we have excellent examples of the wear and tear that comes of too close contact. In the south-east part of Daghestan, on both banks of the Samur River, we find a series of dialects belonging to the Kurine group of languages. These dialects have gradually been submerged by the flood of Armenian and Tartar, and their area has become more and more restricted, so that even within the narrow circle where they are spoken, the influence of the two neighbouring languages is progressively encroaching upon them. This corrosive action is not equally strong in every part, but it is felt everywhere, and if one is to believe A. Dirr, who has made the closest study of these facts,[1] the most remarkable result of this action lies in a morphological simplification.

As early as 1819 Grimm maintained that the inevitable

[1] *Mitteilungen der anthropol. Gesellschaft in Wien*, vol. xxxix, p. 301, and xl, p. 22.

result of a conflict of languages was the loss of their grammar.[1] This is not inevitable, but the fact remains that such a result is frequently observed. Languages which go abroad, being exposed to many and varied influences on the part of languages that often differ widely from them, generally lose their individual characteristics more rapidly than other languages. Displacement, too, is often the cause of linguistic degeneration. It explains, for instance, the differences between the dialects of the Greek colonies as contrasted with those of their capital cities. To other highly probable causes which have been advanced in explanation of these differences (see p. 356) we must certainly add the effect of the non-Greek languages in use in territories to which the Greeks extended their activities. Even without admitting the influence of the languages in question upon the structure of the Greek dialects spoken in the colonies, it is possible that the relative simplification of the morphology and the destruction of many of its phonetic features were due to the proximity of different languages. The people who used them, when they came to speak Greek, imposed upon the Greeks certain new ways of expressing themselves, to which the Greeks, who constituted but a small portion of the population, eventually accommodated themselves.

This linguistic state of affairs, in all likelihood, has singularly favoured the establishment of a common language. From the time when the Greek dialects had eliminated some of their most striking peculiarities, as a result of outside influences, these dialects were liable to absorption into the *κοινή*. What is here true for the dialects of the same language is exemplified in the history of different languages. Like actions and reactions produce like results. In this way a sort of balance between two or more rival languages is established, resulting in the formation of a mixed speech, which then serves as the common language. There is generally one preponderating language which serves as the basis for the compound.[2] It may happen, however, that a common language results from a fairly equal admixture of different languages. This is the case with *Sabir*, used in the Mediterranean ports. This is a mixture of French, Spanish, Greek, Italian, and Arabic. All these have contributed to the formation of Sabir, especially in the case of its vocabu-

[1] *Deutsche Grammatik*, pp. xxxii and 177.
[2] E. Windisch, op. cit., pp. 104 and 113.

lary; the grammatical peculiarities of each have been eliminated.

Pidgin-English, which serves as a common language for the ports of the Far East, and *Broken English*, used by the natives of Sierra Leone, are, like Sabir, mixed languages.[1]

Pidgin-English has a foundation of Chinese, a language which is characterized by a minimum of grammar. Pidgin, properly speaking, is Chinese with an English vocabulary. With this English vocabulary which, as it happens, lends itself remarkably well to this use, sentences have been constructed in which the word-order is exactly that of Chinese. This often produces an amusing combination and proves, as we have said before, that there is an affinity between the idiom of the two languages. Here we certainly have a given language as the foundation for the mixture, but the very character of this language, with its almost entire lack of grammar, particularly fits it for the rôle which has devolved upon it.

The Creole dialects might also be cited as examples of mixed languages. They are based upon a European language, French, Spanish, or English. But in Creole these languages appear shorn of their morphological peculiarities and reduced to a pulverized condition. It is like gravel from which the lime has disappeared, or stones without cement — a thin and formless substance. The necessity to carry on a conversation with foreign merchants in order to transact business forced the natives to learn a foreign language which has finished by displacing the mother tongue. But their apprenticeship to this language was never completed. It was limited to its superficial characteristics, to expressions representing the ordinary objects and essential acts of life; the inner essence of the language, with its fine complexities, was never assimilated by the native.

It may be said that there were social reasons for this phenomenon. The Creole speech, for instance, is the speech of inferior beings and of a subordinate class whose superiors have never troubled nor desired to make them speak any language correctly. Hence the Creole forms of speech are to a certain extent special languages, just as, though for entirely different

[1] Examples of Pidgin-English are to be found in Leland (C. G.), *Pidgin-English*, "sing-song" in the China English dialect, in the 5th edition (1900). For Broken English, cf. F. W. H. Migeod, **CXXXVI.** For Madagascan-Arabic, cf. G. Ferrand, **VI,** vol. xiii, p. 413.

reasons, are the Romany forms of speech above mentioned. Nevertheless, in these Creole forms of speech, as in Sabir, Pidgin-English and Broken English, we have mixed languages resulting from the fusion of two or more different idioms: these, being deprived of a characteristic morphology, cannot claim to belong to any of the idioms out of which they are built. It is a genuine instance of linguistic hybridization. In the following chapter we shall see the consequences which this entails.

CHAPTER V

The Relationship between Languages, and the Comparative Method [1]

APPLIED to linguistic matters, the term relationship is ambiguous and has frequently led those who are not trained philologists into error. With less excuse certain philologists, even, have sometimes taken seriously a mere metaphorical expression and have set up genealogical trees for languages after the fashion of Hozier. As a result, they believed themselves authorized in saying that French or Italian, for example, had sprung from Latin, and in speaking of mother, daughter, and sister languages. This is an unfortunate terminology because it gives a false idea of the relations between languages. There is nothing in common between the "relationship" of languages and generation or filiation in the physiological sense of these terms.

One language does not give birth to another; no philologist could fix the hour of a language's birth. To say that French is derived from Latin means that French was the form assumed by Latin in a certain region in the course of ages. In many respects French is only Latin. No matter how far back we look into the history of French we find a variety of phases following one another in direct order and gradually getting closer to Latin. Nevertheless, it is impossible to indicate the point where Latin ends and French begins. The history of our language has many gaps, and periods about which we have but little information have been crucial moments in the formation of the language. On the other hand, the movement which removed it farther from the Latin has not always been uniform. Despite various vicissitudes, however, there is distinct historical *continuity* between Latin and French which constitutes the relation between them. And this primary aspect of the question we may describe as succession.

There is another aspect to be considered—that of synchronism.

[1] See Meillet, "Le problème de la parenté des langues" (**XLII,** vol. xv, 1914, p. 403), and the works of M. Schuchardt mentioned in the preceding chapter.

After what has been previously said of the natural division of language into separate branches, the term relationship may readily be extended to two dialects issuing from the same language. Within a given area a language originally spoken in exactly the same way becomes subdivided into a certain number of dialectal groups, each characterized by peculiarities extending to a larger or smaller number of neighbouring groups. These groups are said to be related, and they remain so, despite any modifications they may individually undergo. Great as may be the initial divergence between the common language before differentiation and the dialects formed as a result of it, the relationship must be admitted, since it is a recognized historical fact.

We need not take into account such distinctions as political or social conditions cause in language; linguistic relationship includes dialects that are reduced to the state of local languages, *patois* and professional slang, and languages which have been raised to the rank of a common language. Picard and Norman, Poitevin and Berrichon are all related to one another, and are equally related to French, the dialect of the Île-de-France, which became the standard language common to a wide territory. If it is important for the student of the history of French to disentangle each variety it comprises, it is equally permissible for the student, who wishes to get a general view of the development of the language as a whole, to regard it as one language developing and being modified throughout all the centuries of its existence. Indeed, the transformations a language undergoes are due in large measure to its intrinsic evolution. The breaking down of the dialects, the formation of the common language and its superposition on the local tongues, which it penetrates ever more deeply—all this vast process, the history of which we have already sketched, has taken place within the limits of French without in any way disturbing the mutual bonds between its dialects.[1]

There are always degrees in any relation. Thus Provençal is a common language comprising a large number of local forms of speech upon which it has been superposed. We know that Provençal itself is the outcome of a unification of local forms of speech, themselves derived from the same source as the languages of northern France, i.e. all are equally derived

[1] See Meyer-Lubke, **CLXXXI,** Bourciez, **LI,** and Zauner, **CCXXIV.**

from Latin. Naturally, the relationship between the various local Provençal forms is closer than that between any one of them and a given form of French local speech. It is an identical form of language, antedating both, which constitutes the link between French and Provençal. They are only differentiated phases, which have preserved their differences throughout time, of a single language which may be called the Vulgar Latin of Gaul, though the name matters little. This means that, in order to establish the relationship between the two languages, we must combine the two aforementioned aspects, that of succession and that of synchronization.

This combination, however, can be extended yet further spatially and temporally and made to embrace all the Romance languages which are likewise derived from Latin. What we called the Vulgar Latin of Gaul is only a particular form, probably very little differentiated, of Vulgar Latin in general, which in Italy produced Italian, in Spain Spanish, in Portugal Portuguese, in Rumania Rumanian, to mention only its principal representatives. All these are common languages standardized by literary traditions, maintained and generalized by political conditions, and individually co-extensive with a considerable number of dialects and sub-dialects derived from them. The relationship existing between all these dialects, putting aside the differences between the common languages and their local forms, varies considerably in degree. Some, being only recently differentiated, are still very closely allied ; others have been separated for so long that they have ceased to have much in common—for example a Portuguese patois compared with a Rumanian. Apart from outside influence, which we will not consider at present, the contrast is due to independent developments. Yet after all, in the eyes of the philologist, Portuguese and Rumanian are but two transformations of the same language, Latin.

This Latin is familiar to us. We are thus enabled to follow the road which led up to the Romance tongues now in use, and to determine the degree of relationship as we estimate the respective importance of the modifications. It is hardly necessary to say what valuable help is furnished to the Romance scholars by a knowledge of the political and social history of the Romance countries. Such knowledge provides a permanent control permitting dates to be assigned to events which form

landmarks in the mutual history of both people and language. But our documentation comes to an end when we get back to Latin; we know nothing of the state of the Latin language prior to about the third century B.C. Hence the establishment of a relationship reposing conjointly upon linguistic and historical data loses what constituted its guarantee and its stability. However we are able to go back to a pre-Latin period, thanks to the *comparative method*, whose province we must now define.[1]

The comparative method is simply the historical method applied to the past. It consists in extending the reasoning which holds good for historical periods to epochs for which documents are absent.

We have just seen that the modern Romance languages resulted from the independent but parallel evolution of forms of speech derived from Latin. What constitutes the unity of the Romance tongues is a certain *ensemble* of features common to them all; by these features their mutual relation is recognized. The majority of them were already more or less clearly marked in Latin. A few of these were innovations common to them all, but those which are evident in all the Romance languages, even when their exact equivalents do not exist in Latin, may be regarded as the survivals of that little-known linguistic stage called Vulgar Latin, which is intermediate between classical Latin and the Romance languages. Thus we get a comparative grammar for the Romance languages and by means of it we are able not only to establish the direct succession of these languages to Latin, but also to reconstruct the grammar of a linguistic stage regarding which documents help us little or not at all.

But Latin itself is not an isolated language, without connexions with other languages. Its grammar shows numerous features in common with Greek, of which the ancients were quite aware. Modern scholars have discovered that Greek and Latin are allied to other groups of languages, which, beginning with Sanskrit, are spread over a considerable part of the old world, from India to the western extremities of Europe. The

[1] See Meillet, "Sur la méthode de la grammaire comparée," vol. x, 1913, pp. 1–15. The main results are clearly explained by Porzezinski, **CXCII**, pp. 39–80.

name Indo-European has been given to these languages for want of a better term. These " languages " must, of course, be understood in the sense which we have given the word above ; they are linguistic groups which at a definite moment in history were able to attain a more or less complete unity, but have all been split up and differentiated in the course of ages, in the manner indicated.

By assembling the features common to all these languages we have constituted the so-called comparative grammar of the Indo-European languages,[1] which merely superposes its rules upon a large series of comparative grammars more limited in their scope, namely, the comparative grammars of the Romance, Slavonic, and Germanic languages, etc. Each of these comparative grammars ends with the reconstruction, often purely schematic, of a linguistic state called, for example, Primitive or Common Germanic,[2] or Primitive Slavonic, and which is the exact equivalent, in another domain, of Vulgar Latin (or Common Roman) to which the comparative grammar of the Romance languages leads back. The existence of Latin gives to Romance scholars an unusually strong basis upon which to build their deductions. Slavonic and Germanic philologists have often to admit with regret the deficiency of documentary data as regards common Slavonic or common Germanic which might bring valuable corroboration to their reconstructions. We must not, however, exaggerate the poverty of the Germanic or Slavonic philologist as compared with his Romance colleague, who has in Latin only a means of checking his deductions. He has to build up his hypotheses without reference to Latin, and sometimes he has the pleasure of demonstrating that the true succession is not in classical Latin, but in his reconstructed edifice of Vulgar Latin. The common language, hypothetically reconstructed under the name of Vulgar Latin, has often, for the Romance philologist, a greater precision than the classical Latin preserved in texts. And Latin itself is often utilized by the Romance philologists only

[1] Cf. primarily Brugmann and Delbrück, **CL,** and Meillet, **XCIV.** The founder of the comparative grammar of the Indo-European languages is the German, Franz Bopp, **CXLV.** Later on came Schleicher, **CXCV.** Cf. also F. de Saussure, **CXXI,** Hirt, **CLXVI** and **CLXVII,** Bechtel, **CXLIII,** Hübschmann, **CLXXI,** Schrader, **CC, CCI,** and **CCII,** and Feist, **CLVIII** and **CLIX.**

[2] F. Kluge, **CLXXIV.**

as an aid in the reconstruction of the Vulgar Latin which is both the starting-point and the ultimate goal of their work.

As they generally deal only with common languages hypothetically pieced together, the philologists who reconstruct Indo-European find themselves condemned to an even more schematic task. The Indo-European of the philologist has no concrete existence; it is only what has been called "a system of linguistic links".

Thus the best-informed authority on Indo-European could not express such a simple sentence as "the horse runs", or "the house is large" in this language. The knowledge of the most learned among them goes no further than the principles of grammatical structure. No one can speak Indo-European, but a philologist should be able to tell us the categories of this language, the manner in which they were expressed in it, and the value of its suffixes and word-endings.

And these are the essential points, for they allow us to establish, by philological means, the mutual historical relationships between languages. The comparative method, although it envisages the most distant past, in reality bears only upon later developments, for its effect is to throw light upon the details of languages which are attested by documentary data. The most clear-cut result obtained from the comparative grammar of the Indo-European languages is the determination of the relationship between these languages.[1] Thus all the languages of India and Persia, Slavonic and Germanic, Romance and Celtic, considered from the view-point of time, appear to the philologist merely the result of successive differentiations of a unique linguistic state, which antedates all of them, and is called Indo-European.

Is it possible to go still further back? There is no reason why we should doubt that this is so: certain modern philologists even seem convinced of it. We have seen how the comparative grammar of Indo-European languages was reconstructed—by superposing it upon other comparative grammars. It is permissible to expect that by continuing to clear away accretions that obscure the history of languages,

[1] For data as to the new Indo-European tongues, which have been discovered in the last twenty years, in Central Asia, cf. especially Meillet and Sylvain Lévi, **V**, 1910–13, and **VI**, vols. xvii and xviii; Gauthiot, **V**, 1911, and **LXXII** (b.). An exposition of the several results obtained is given by Meillet, *Revue du Mois*, Aug., 1912.

and by sorting out the general principles underlying their structure, we shall be able eventually to reconstruct the common languages which have the same relation to Indo-European as common Slavonic bears to common Germanic, Latin to Greek, or, in more recent times, French to Italian.

Certain points of resemblance have already been long established between Indo-European and Finno-Ugrian. In the Semitic field, where the comparative work is well advanced, we find some characteristic features bearing a strange resemblance to Indo-European. Hence some philologists have conceived of the possibility of a linguistic community, embracing both the Semitic and the Indo-European languages.[1] Thus both may turn out in the end to be representatives of a single linguistic group; French, reduced to its last terms, would then be the same language as Arabic or Ethiopian, just as it has been proven to be the same as Russian, Persian, and Irish. We must not allow ourselves to be put off by startling differences between these languages. If the hypothesis of Indo-European-Semitic community is a bold one, it is not because of the extreme variety of the languages thus linked together to form the unit. The fact is that Semitic, according to present indications, appears to be nearer to Indo-European than other linguistic groups so far delimited. Can these, in their turn, be more and more reduced until they dissolve into larger units historically superposed?[2] This is the secret of the future; for there are a considerable number of languages to which the comparative method has never yet been applied, or concerning which it has not said its final word.

The value of the comparative method is obvious, but so also are the faults inherent in it. It rests entirely upon linguistic principles, and can expect but little help from allied scientific systems. We must, in fact, guard against confounding dialectal relationship, such as is revealed by the comparative method, with relationships of race and culture. These are three distinct orders of study.

There are three classes of scholars working independently in the prehistoric field: anthropologists, archæologists, and

[1] Hermann Möller, **CLXXXIV,** and *Indo-europaeisk-semitisk sammenlignende Glossarium*, Copenhagen (1909); Pedersen, **XXX,** vol. xxii, p. 341; and Cuny in **XIII.**

[2] Trombetti, **CXXVIII.**

philologists. The first have at their disposal skeletons and skulls; the second, cultural objects such as ornaments, arms, pottery, utensils of varied form and material, in a word, all the equipment of prehistoric man; whereas philologists have to work on the comparison of sounds and words. All three are concerned in producing a methodical arrangement of facts. Each, in his own field, forms series between which he establishes chronological and genetic connexions whenever possible. So far, however, they have not succeeded in synchronizing their respective series. No common measure exists.

Comparative grammar offers a method of classifying languages according to their respective characters, and of grouping them into families. By comparing sounds and forms innovations are brought to light, and contrasted with survivals from older stages. Philologists have succeeded in reconstructing the prehistoric stages of the Indo-European languages. But they have no knowledge of the people who spoke them. They cannot say who were the ancestors of the Greeks or Germans, the Latin or Celtic peoples. They only know by what transformations Germanic and Greek, Latin and Celtic have passed before they reached the stage revealed by the texts. Even the names under which they have baptized the reconstructed languages are purely arbitrary and conventional. Apart from their strictly philological use, the names *Indo-European*, *Italic*, *Celtic*, or *common Germanic* have no meaning. They are merely linguistic expressions and have a significance only for the philologist.

The terms used by the archæologist should be equally limited to their archæological application. When a series of vases or swords of a certain type has been constituted, and the geographical area to which they belong has been determined, we are at a loss to name the particular culture to which they belong. The implements are nameless, so much so that for convenience of reference we are obliged to give them conventional names derived from the places where they were discovered. Archæologists speak of the *situlæ* of Hallstatt or the swords of La Tène, of Villanovian decoration or the grave-furniture of Aunjetitz. In the same way, anthropologists speak of Neanderthal man or the Chapelle-aux-Saints skull, and contrast the dolichocephalic and brachycephalic peoples of diverse regions without being able to tell us which languages correspond to their ethnographic divisions.

Even when we hold the skull in our hands, we shall never know what associations of words and ideas were contained within the brain-pan, or what verbal images were formed in its nerve-centres. We have already stated (p. 235) that it is impossible to establish any connexion between language and race. We are equally powerless to determine what implements were used by the peoples whose languages we know, and to what extent languages and civilizations correspond. One thing alone is certain, and has often been demonstrated in history; it is possible for people to belong to different races and yet speak the same language, or to speak different languages and use the same implements. Even an advance in the construction of tools or weapons is not the privilege of a single race; indeed it is impossible to calculate the ethnic movements of prehistoric Europe according to the succession of archæological periods (the Stone, Bronze, and Iron Ages). The moment printing was invented it was immediately extended to nations so different in race and language as Germany, France, and Italy. It is, therefore not only difficult in practice, but impossible in theory, to establish any accord between the results of the three types of scientific research of which we have just spoken. Linguistic relationship can hardly expect much corroboration from archæology or anthropology. The utmost the philologist can ask from an allied science is either some directing hypothesis or some control to enable him to check his researches. He can use none but linguistic methods to prove linguistic relationship.

Reduced to its own resources, the comparative method is sometimes ineffective. It presupposes that the evolution of languages has been regular and continuous, without external interruptions. Although it is an extension of the historical method, it is somewhat disdainful of history, since it uses theoretical data only and assumes a simplified form of history, reduced to a regular succession of causes and effects and shorn of all that constitutes the real character of history, namely, complexity and variety. We may argue that this is in obedience to an inevitable necessity. Ignoring the political and social conditions under which language is developed, it reconstructs its prehistory by linguistic methods. Here it is treading on safe ground, for experience has shown the continuity of all linguistic transmission. But in the absence of all precise data

upon the conditions underlying historical development, the conclusions we may draw from the comparative method concerning the determination of linguistic relationship are greatly weakened.

We are, then, reduced to determining the genetic relationship by means of resemblances between the languages themselves. This is a dangerous procedure. It sometimes happens in nature that related individuals are so much alike that one may be mistaken for the other. But it does not happen that all individuals who are doubles are also related. Resemblances in linguistic relationships are also frequently deceptive.

This is particularly the case in the matter of vocabulary. Etymology proves that in the languages whose history we know words with closely allied or even identical forms may have the same meaning without possessing anything in common from an historical point of view. An oft-quoted example of this is the word *bad* which has the same meaning in English and Persian, although there is no etymological connexion. With this we might compare the German word *Feuer* which originally had nothing in common with the French *feu* " fire " except the same meaning. Similarly there is only a chance external resemblance between the English word *whole* and the Greek ὅλος, between the Latin *femina* and the Old Saxon *fêmea, fêmia* meaning the same thing, the Latin *locus* and the Sanskrit *lokas* " world ", the modern Greek μάτι " eye ", and the Polynesian *mata* " to see ", etc. Such examples could be multiplied.

The vocabulary may even be completely changed without any notable alteration in the language either in phonetic or grammatical structure. It is very important that we should have a knowledge of the vocabulary of any language if we are desirous of studying its culture. Vocabulary thus forms a bridge between philology and archæology. But the two ends of the bridge lead to an impasse ; for a certain type of language or even a certain type of implement can never be inferred from a given vocabulary.

Confining ourselves to the Indo-European field, we know that in Western and Southern Europe there are two large vocabularies of prehistoric date whose boundaries do not coincide with the linguistic lines of demarcation. One, called the Western vocabulary, extends over the Italic, Celtic, and

Germanic domains, and is mixed, in Balto-Slavonic, and especially in Baltic, with a vocabulary which is really Oriental; the other, known as the Mediterranean, is especially recognizable in Greek, but in one of the Italic dialects—Latin, the most important of all—it came into conflict with a Western vocabulary, and partially supplanted it. Thus Celtic and Germanic, and to a certain extent Italic, have a considerable number of common terms. From the view-point of grammatical structure, however, these three languages are very far from being intimately related. The morphological links between Celtic and Italic are intimate,[1] so much so, indeed, that certain philologists have maintained the hypothesis of an Italo-Celtic unity. The grammatical structure of Germanic, however, is very different from that of Celtic, and if in certain respects it approximates to Italic, in others it bears an equal resemblance to Balto-Slavonic. In short the morphological relations of these diverse languages do not coincide with the relations between their vocabularies.

Nor do the phonetic relations agree any better. In fact it might seem odd to seek to introduce phonetics into the matter. Phonetic changes doubtless take place mechanically, independent of the will or even of the knowledge of the speaker, but with a regularity so limited in principle and a variety so disconcerting in results that one can hardly rediscover in it any of the characteristics of a given type of language. Furthermore, the chief characteristic of phonetic change is its absoluteness; so that it is not necessary in this case, as in morphology, to distinguish between weak and strong forms, the latter of which are faithful records of older states now transformed. Morphology betrays its origins by its survivals, and so makes it possible for us to recognize the bonds of affinity.

Phonetics, which leaves no survivals, gives no information in this respect.

Even if we restrict our study to morphological criteria, we are not clear of difficulties, for morphology also possesses its ambiguities. In establishing a linguistic relationship on the basis of resemblances in grammatical structure, we assume that the structure in question is modified in a regular and continuous fashion. But what is there to guarantee such continuity?

[1] Cf. Dottin, **LXVIII**; Hirt, **CLXVII**; and Feist, **CXIX.**

We know how many external influences may assail morphology; so long as these influences affect only its secondary and superficial aspects it may retain sufficient characteristics to enable us to determine genetic relationship. But we can imagine an extreme case in which the same language, by reason of repeated influences, might, in time, combine in almost equal degree the morphological processes of two adjacent linguistic groups. Such is the case—which occurs very rarely, however—to which in a foregoing paragraph we applied the term hybridization. We know from the field of natural history, where, moreover, conditions are very different, how difficult it is to classify languages into families, when order and unity is continually broken up on account of hybridization. In the case of linguistic hybridization, such a morphological criterion becomes inoperative.

At the same time all its effectiveness is destroyed when morphological transformations take place very rapidly, or are recognized only after such a long interval of time that the two languages in question, although derived from the same prototype, no longer have anything in common from a morphological point of view. If we knew French only as a spoken tongue, and under its present form, and if we were also ignorant of the Romance languages and Latin, it would not be so easy to prove that French is an Indo-European tongue; for certain structural details as, for instance, the opposition of *il est, il sont* (pronounced *ilè, ison*), or, better still, the numerical nouns and the personal pronouns, together with certain features of vocabulary such as terms of relationship, are all that French has preserved of Indo-European. Who knows whether more cogent reasons might not be found for connecting it with Semitic or Finno-Ugrian?

Somewhere on the face of the earth there may still be unsuspected Indo-European languages which, because they had no history and were used by illiterate populations, may have lost all those features that could have betrayed their origin. Judging by the sound method we should have no means of proving that they were related to Greek, Latin, or Sanskrit. But this method brings us in its turn to the inevitable conclusion that it is equally impossible to prove that two languages are not related.

We can go further still. If morphological criteria are used

for linguistic relationship, the morphology should be clearly characterized to enable us to establish this affinity; otherwise there is a danger that our demonstration may become impossible. Hence there are stages in the determination of linguistic relationship which have nothing to do with the historical relations of the language, but simply with the degree of individuality possessed by its morphological structure. There are languages which possess a very complex grammar with a whole paraphernalia of varied morphemes, classifiers, suffixes, each with a fixed place and bringing with it into the body of the sentence a series of characteristic peculiarities; such, for example, are the Bantu languages. These languages are very difficult to master, but they have the advantage of strongly marked morphological features. If we were to find anywhere on the face of the globe—no matter where—a language possessing the same characteristic morphological structure, employing the same processes of suffixation and classification or processes whose differences can be explained as due to normal phonetic alterations, we should be right in concluding that this language belonged to the Bantu family, and of using it in the study of the comparative grammar of this linguistic group.

On the other hand, however, there are languages which have no grammar, but whose entire morphology is contained in the less tangible processes of combining isolated words. We have already cited the languages of the Sudan, or those of the Far East, as examples of this type. Their individual qualities are much less distinct; the processes of word-order, apart from the fact that they are much less varied than the phonetic morphemes, are far less valuable as proof. When it is merely a case of placing a given word in a definite part of the sentence, as in Irish, where the verb is at the beginning of the sentence, and Turkish, where it is at the end, the word-order is generally a mere mechanical process, partially morphological, and may consequently be explained by the general condition of the language. On the other hand, where it is by some general process that the word-order is subordinated to the ideas which have to be expressed, as in Chinese, this process entails some intellectual and absolute quality, a fact which makes it very interesting to anyone wishing to form a general and human theory of mental categories, but sorely puzzles the philological historian when he wishes to find in any given language character-

istic details which will distinguish it from other languages. And yet at this extreme point linguistic relationship cannot be accurately determined ; our only resource in such a case would be the vocabulary, and this, as we have seen, is not to be trusted. Chinese says *wôo pu pha tha* which, translated literally into French, is *moi pas craindre lui* " I not fear him ". This is French of a special kind, which is called " petit-nègre " French. But nevertheless there are natives of West Africa who always speak this sort of French. If they spoke Chinese they would speak it in the same way except that they would use different words, that is to say, different sounds. This " petit-nègre " would then have a French and a Chinese vocabulary, but the verbal images would be the same and we should not be able to discover in them any form of French or Chinese thought.

How then are we to classify languages in families when they are almost entirely lacking in grammar, like the preceding, and when, furthermore, the vocabulary has been upset by external influences ? This is the case, for example, with the languages of Western Africa, whose vocabularies, owing to certain historical circumstances, are extremely varied and which all display, with few exceptions, an equally poor grammatical development.[1] As we are not acquainted with the antecedent states of these languages and can hardly go back farther than half a century in their history, it is generally impossible to determine the origin and formation of their vocabularies. We have therefore no means of setting up their family tree, or, at any rate, our classifications leave room for a number of uncertainties and ambiguities. We are victims of our lack of data, and victims, also, of our method, which prevents us from appealing to other scientific systems to fill the gaps in the linguistic evidence.

We are thus forced to conclude that the demonstration of linguistic relationship is but relative. It depends primarily upon the amount of linguistic evidence available, which, corroborated by political and social history, provides us with a fairly large body of proof. But when we are dealing with a language whose history is unknown, this also depends upon the richness and variety of grammatical forms. Finally, it must be remembered that within a given family, the relations are

[1] Delafosse, **VI**, vol. xvi, p. 386.

often disturbed by the reciprocal actions of the various dialects upon each other.

Certain linguistic theorists will claim that this matters little. For them linguistic relationship is absolute and independent of demonstration. They base it, in fact, upon the will of individuals to speak, and the consciousness that they are using the same language as their parents. And indeed, in most cases, this feeling for linguistic continuity suffices to define the existence of the relationship in itself. But we cannot completely set aside the possibility of error on the part of the speakers. If we admit hybridization, the melting into one language of the characteristics of two others, it may happen that the one linguistic system passes unconsciously into another. The new generation will have changed the language without realizing it. This is doubtless only an extreme case, which can scarcely be exemplified among civilized nations but is conceivable under certain linguistic and social conditions. It cannot be disregarded here, although it is avowedly fatal to linguistic relationship. Not only does any demonstration of relationship then become impossible but the very notion is effaced and disappears.

Fortunately, in most languages, particularly those whose history is well established, the relationship can be fixed with remarkable exactitude. Philologists have succeeded in classifying languages into families, Indo-European,[1] Semitic,[2] Finno-Ugrian,[3] Bantu,[4] Malayo-Polynesian,[5] etc., within which internal relationships are sometimes questionable in detail, though incontestable in principle. It is not to be doubted that the progress of comparative philology will eventually increase the number of linguistic families properly established.

[1] Brugmann and Delbrück, **CL**; Meillet, **XCIV.**
[2] Brockelmann, **CXLVIII.**
[3] Szinnyei, **CCXII.**
[4] Meinhof, **CLXXIX.**
[5] Brandstetter, *Monographien zur indonesischen Sprachforschung*, Lucerne, 1906 ff. Cf. also G. Ferrand, **LXXI.**

PART V

WRITING

CHAPTER I

Origin and Development of Writing [1]

THOUGH the problem of the origin of language does not admit of any satisfactory solution, such is not the case with the problem of the origin of writing. This can be directly attacked and viewed from every angle and in all its bearings, for the origin of writing is comparatively recent. The ancient languages are known to us only from the time when they were written down; but many are known to us from that very moment, and often the first text that comes into our possession is also the first one which enshrined this ancient tongue in writing. On the other hand, there are quite recent languages which have not been written down until our own time, and almost under our very eyes. Thus, we can study living examples of the processes by which a spoken tongue became a written one, and judge of the results of the mechanism.

At the same time, in order to understand the problem of the origin of writing, we must try to get away from our civilized habit of mind. The symbolic character of writing is a thing we take for granted. Our children only require a little training and reflection to understand that what they see written in black and white in the books before them are the images of the words they hear. They readily become accustomed to this psychical exercise, which consists in co-ordinating the picture with the sound, and combining visual and auditory representations together in the one conception of a "word". So short a time was required in our infancy to bring our minds to perform this exercise that we do not even remember it. The idea of written language has been acquired by us without effort, in a semi-spontaneous fashion.

And yet it is certain that this idea is not inborn. We profit by the intellectual gropings of our distant ancestors who facilitated our task by preparing human mentality for it. How

[1] Cf. in general Ph. Berger, **XLVIII**, Danzel, **CLI**, Lévy-Bruhl, **LXXXVIII**, and the final chapter in Maspéro's *Histoire des peuples de l'Orient*. For the material processes by whose means writing came into being and was perfected, cf. de Morgan's book in this series, *Prehistoric Man*, in the chapter on the figuration of thought, whose text and illustrations admirably supplement the data given in the present chapter.

much time and effort they must have expended in perfecting in this exercise the brain transmitted to us which performs it almost mechanically!

We know that before writing words men have begun to write ideas. The picture was first used as a symbol of the object. Even this, however, was not done all at once; the employment of picture signs for ideas presupposes that man had learned the rational value of graphic signs. To-day, there are savages who still completely identify the object with the image. This identification, which seems so strange to us, does not proceed from illusion or gross confusion. It is due to the fact that the savage conceives all things, images as well as objects, in a mystic fashion. In his eyes, the outside world appears to be made up of a chain of phenomena, full of occult properties, whose reciprocal connexions are not subject to the law of contradiction. His own activity is but part of the woof of the external world. He performs no act that does not possess some repercussion in the visible and invisible universe. What we call superstition, which consists in giving a mystic meaning to the most commonplace acts and in establishing some hidden relation between the most diverse events, is the ordinary state of mind of the savage. This is very significant in connexion with the use of signs.

Picture a civilized person marking his path by branches, or by tracing a cross upon the sand or on a rock. He would be guided by the purely rational motive of finding his path again, or of providing some indication of it to the companions who were following him. But to the savage, the mere tracing of a sign, with its mystical implications, inspires altogether different motives. To lay a branch upon the road is to take possession of the ground one treads, to conjure or cast a spell, to attract or repel a spirit, to hunt down an invisible enemy while barring the road to him; or, on the contrary, to leave him a pledge by which he may profit at your expense; in short, it means to accomplish at one stroke some act whose consequences, favourable or fatal, will reverberate throughout the world of existence.

Similarly, the picture of a donkey or a dog invokes in our civilized minds the idea of a donkey or a dog, and nothing more. To the savage, however, it is the very donkey or the dog itself.

And if, instead of an inoffensive creature, the picture should happen to represent some malignant beast or ferocious enemy, to what terrible consequences may it not expose the beholder? The language of signs, therefore, contains all the magical possibilities of the spoken tongue, taboos, for example, and euphemisms. It is as dangerous to draw a tiger or a hippopotamus as to mention them by name, since the image, like the name, is mystically a part of the creature.[1] Or, again, from opposite motives of identical origin, the savage will take care to represent the enemy or some formidable animal in order to placate or appease him, and thus turn him into a valuable ally. Certain savages draw a serpent or leopard upon their weapons with the idea that these animals will confer a portion of their power on the object they decorate. Thus adorned, the lance or shield becomes endowed with magic virtue; the leopard, for example, communicates strength, and the serpent cunning to foil the attempts of the enemy to entrap its owner. In this way a whole system of fetishes and talismans is built up, to express the mystic conceptions of the savage in symbolic imagery.

It would obviously be an exaggeration to limit the scope of the mental activity of primitive man within such narrow bounds. We must grant him a little latitude, and admit that at times he must have shaken off the yoke of his mystic obsessions. The sign may also have served him as a kind of reflex, testifying to his unconscious need for external expression—for the projection of his personality. It was a kind of schoolboy prank, such as the carving of his name on walls with his pocket-knife, or the reflex act of one who carelessly knocks off the heads of flowers with his stick in his exuberant enjoyment of the sunshine and fresh air. Let us even grant primitive man some capacity for artistic enjoyment. Why not? The drawings traced on reindeer bones by the cavemen have a finish and perfection reminiscent of the work of Japanese artists. These distant precursors of Utamaro and Hokusai might well be proud of their achievement. Why should they not have taken pleasure in executing these works, for no other reason than to experience æsthetic satisfaction? When we endeavour to make a detailed analysis of the sources of primitive man's mental activity we should assuredly take into

[1] Danzel, **CLI**, pp. 67, 72–3.

consideration reflex acts and æsthetic motives. None the less, there is an essential difference between primitive and civilized man. The latter can also depart from the rules his reason imposes upon him. But when he comes back to himself again and recovers his balance, so to speak, his mind naturally reverts to a rational conception of things ; indeed, he only becomes conscious of his folly through the use of his reason. On the contrary to a primitive mentality the natural state is the mystic state. The mind is soaked through and through with mysticism, nourished and sustained by it. Even if primitive man seems to come out of this natural state for a moment, he nevertheless has the roots of his being deeply implanted in the mysticism natural to him.

Primitive man's idea of a sign or image excluded the possibility of a writing like our own, the principle of which is rational. The history of the development of writing thus presupposes that a rational mentality has evolved and shaken off the bonds of mysticism. That was not accomplished all at once. The point of departure no doubt, was the fact that a sign embraced a number of different significations, and lent itself to many different ends.[1] While it was a talisman charged with magical virtues, the sign was also the material reproduction of an object, and impressed itself as such upon the mind. Little by little, the magical significations of the sign were eliminated, and its subjective and mystical import became subordinated to the objective and rational one, and finally the one was substituted for the other.

The leopard's head graven upon the shaft of the lance was certainly put there to confer magic virtue ; but it also enabled its possessor to identify his weapon, provided his neighbour's did not bear the same sign. Hence, it became a property mark. The branch left upon the ground with magical intent proved very useful as a road-mark ; thus, upon occasion, it became a mnemonic sign, and introduced into the mystic act a rational element which grew more and more powerful and finally dominated it. We are, therefore, right in regarding these property marks and mnemonic signs as the starting-points of writing.[2]

[1] Danzel, **CLI**, p. 48.

[2] A. van Gennep, *Revue des traditions populaires* (1906), pp. 73–8 ; **LXXIV**, Second Series, Paris (1909).

But with mnemonic signs we have still only reached the half-way stage to writing. For while these could serve to represent certain forms a thought might take, they could never express thought itself. A well-known example of this is furnished by the "message-sticks" of the Australians. These sticks, covered with notches, served to convey information and orders—sometimes a series of very complicated orders—but the uninitiated could not interpret them. The messenger's stick, without the messenger himself, is incomprehensible. For the sender it was primarily a means of preventing failure and treachery. The stick serves as a guide, a memory-aid. The combinations of notches give an algebraic and figured *schema* of the communication to be made, an outline. It indicates the number and the sequence of ideas, but the ideas themselves are not represented.

At least they are unrepresented for the majority; for it is clear that a secret code is implied between two correspondents, probably unknown to the messenger, according to which a special notch represented a special idea. Here, indeed, we have a form of writing, rudimentary, no doubt, and very limited in its resources, but nevertheless enabling two men to communicate their thoughts in a material form, which comes very near to being the definition of writing.

In the same category as "messenger-sticks" are the Peruvian *quippos* and the Iroquois *wampums*. We know what is meant by these two words. The quippos consist of cords of various-coloured woollen threads, with more or less complicated knots placed at varying heights. By combining the colours for the threads, the thickness and position of the knots, and by tying the cords together according to certain conventions, a means was achieved of symbolically representing ideas, and of presenting them in a definite sequence. The quippos play an important rôle in Madame de Graffigny's *Lettres d'une Péruvienne*. They have therefore acquired the right to be cited in French literature. The wampums are bands of sectioned pieces of shell arranged in patterns whose combinations form geometrical figures. Some of them, it is said, contain no less than 6,000 to 7,000 pieces. The longest known has 49 strings. In the quippos and wampums we find the utilization of a new element, colour, which adds variety to the means of expression and accordingly enriches the facilities for this expression.

Yet, however perfect the quippos and wampums may have been in their own way, they were no more than mnemonic contrivances; and even if it could be proved that the possibility of suggesting certain ideas existed, their combinations cannot be likened to systems of writing, which aim at expressing all ideas. The quippos and wampums could not be developed into a system of writing owing to the material of which they are made. It does not permit of any practical improvement. Some authors claim that the quippos at least offer possibilities for alphabetic combinations; but this is nothing but an attempt, long posterior to their invention and use, to adapt them to the European alphabet. The ogham alphabet used in Ireland was formed in this way upon the model of the Latin alphabet, the strokes being cut across the edges of the raised stones. Attempts like these were destined to lead nowhere.

Writing must obviously have developed in another way. Its starting-point was the image, which rendered the idea of objects sensible to the eyes, especially the image drawn upon stone or clay, bark or parchment.

As soon as the sign came to be recognized as an objective representation, writing had begun. The oar planted by Ulysses upon the tomb of Elpenor (Odyssey xi, 77; xii, 25) may be described as the first Greek inscription. This oar was intended to recall to passers-by the profession of the deceased, exactly as the pictorial and similar signs of our shopkeepers indicate the nature of the business and the commodities sold; or as the ex-votos of the churches indicate the gratitude of the faithful. This oar was an emblem. Man has long used this sort of emblematic language, even in historical periods when we are tempted to regard it as having become merely allegorical. Witness the message which the Scythians, according to Herodotus (iv, 131), sent to Darius, and which was made up of a bird, a rat, a frog, and five arrows. That constituted a message conveyed by signs and its meaning was interpreted by the sage, Gobryas.

Immense progress was achieved when men learned to draw and to make the picture the emblem of the object. By combining a series of figures, a coherent and connected tale could be told. Such living pictures are presented by the figured inscriptions discovered upon Scandinavian rocks of prehistoric date; further, we find them still in use to-day among

the American savages.[1] Some of the Épinal pictures furnish similar examples. We can get a still better idea of them by thinking of a piece of news described by the cinematograph instead of being read in a newspaper.

Out of this ideographic writing was born the earliest writing which we know, and from it may be traced every system of writing used by men. It consists in representing each idea or object by an adequate sign. We can obtain a clear idea of its original character by referring to three types of writing which are perfectly well known to-day—Chinese character, cuneiform, and hieroglyphic. It is important to realize, however, that none of these remained purely ideographic, and that from the earliest times at which we know them the ideograph had ceased to play more than a limited part in them, the reason being that the ideograph is not altogether adequate to its purpose and leaves too much to be supplied by the imagination.

Even supposing that every idea were to receive an adequate and definite sign to-day—a thing practically unrealizable—this complicated system would be inadequate to-morrow, for it is impossible to grasp all the infinite shades of thought and to follow its perpetual modifications. An absolutely fixed ideographic writing would be like a rigid garment imprisoning thought; the thought would soon break its shackles and render even the remaining fragments useless. At best such a type of writing could only be of practical value in some esoteric science, fixed once for all and destined never to vary. It might serve as a sort of algebraic system for laboratory work; but it could never be popularized, neither could it serve as an instrument for general education or social progress. Despite the corrections that have been made in the ideographic system, we know that Chinese and hieroglyphic writings are still open to criticisms of this kind.

One advantage of ideographic writing—perhaps the only one—is that it can be read by people speaking different languages. The maritime code of signals is interpreted by all sailors in the same way, though each speaks a different language. The ideograph, representing ideas, not sounds, has the same advantage as a code of signals; it suppresses the word as a medium and reproduces the language thought instead of the

[1] De Morgan, op. cit., chapters on writing.

language spoken. It is easy to show the illusory nature of this advantage. A signal-code, according to definition, applies only to a small number of precise and technical ideas, that is unchanging ideas, which have been established by agreement among men of the same calling. But a signal-code cannot be generalized. For ideography to have any generalized significance it would have to consist entirely of signs which could immediately be interpreted by all normal men. Such a hope is chimerical. So long as it is a matter of concrete ideas such as birds, feathers, oxen, eyes, the sun, and so forth, it presents no difficulties. The difficulty begins, however, the moment abstract ideas are in question. If fanciful or arbitrary ideograms were adopted for these, we should have got right away from the very principle of ideographic writing; if, on the other hand, we utilize the ideogram expressing a concrete object, choosing the pen, for example, as the emblem for justice, the ox for riches, and the eye for royal power, we should merely be creating a system of ambiguities.

And what of grammar? Ideographic writing has no means of expressing it. Doubtless, certain languages accommodate themselves with little trouble to this grave lacuna—the languages which have no inflections. When the grammar consists entirely in a special word-order, ideographic writing can express it easily. It is obvious that if there are special signs for the idea of *I*, *to wish*, *to eat*, and *meat*, a short "petit-nègre" sentence like *moi vouloir manger viande* could be accurately rendered by ideographic writing, for it would be sufficient to establish, once and for all, the order in which the characters were to be read. The morphology, as we have said before, would then lie in the word-order. But this does not carry us very far, for, however poor in grammar we suppose a language to be, there are nevertheless elementary grammatical notions which the ideograph does not naturally express; for example, the distinction between the individual and the species, between noun and verb, tense, mood, negation, etc. If these notions are to be rendered by special signs added to those which express the idea, like an exponent added to the algebraic symbol, we introduce a new factor into our writing—namely, the distinction between empty and full signs. Ideography would at once be complicated, because it would be following two different systems; or rather, particular characters are

added to the ideogram in order to indicate its morphological value, so to speak, and the ideogram-type could then be changed in a hundred different ways, according to the use of the word it represents, and to which the new elements are attached. This would multiply the number of ideograms to infinity, and make writing practically useless. Or an ideogram might be succeeded by one or more empty signs in order to indicate its grammatical value. The disadvantage here is the fact that several signs must be juxtaposed in order to express even a single notion. The first process is best suited for monosyllabic tongues, and, in fact, it is actually in use in the orthography of Far-Eastern languages, like Chinese. But strictly speaking even in Chinese it is combined with the second, so difficult is it to transcribe a language on the ideographic principle alone.

No ideographic writing has remained unchanged as such. Doubtless this is due not only to the patent defects of this form of writing but to a necessary evolution which made written language the intermediary between the language of thought and the language of speech. The mind had at its disposal various processes for translating thought ; it had gesture, and sounds, and it created the image. These processes permitted of the use of conventional signs which could be adapted to different cases, but which were often duplicated. Unquestionably, there are instances in which the gesture expresses the ideas more perfectly than the sound, and the sound more perfectly than the image. In general, however, the symbolic value of the sound soon came to coincide with the symbolic value of the image, and could replace it at need. The image and the sound could be substituted for one another. Once the equivalence of the two had been arrived at, the image could be treated, first as the emblem, then as the graphic transcription of the sound. Then, since the name of the object was, in its turn, linked with the object, this name came to be linked with the image which had invoked the idea. The sign representing the object likewise became the sign of the sound expressing the object. Phonetic writing had been created.

Let us imagine a graphic sign representing a pig (French " porc ") and originally denoting nothing but " pig ". This sign, being read " pig ", would eventually cease to represent

the animal and would come to represent the name it bears, and hence the sound constituting that name. Thus, it would come to be employed to represent phonetically every word having the sound corresponding to the sign for pig; thus, it could be used to transcribe the French sound *por* whether it related to a *porc*, a *port*, or to *pores*. Better still, in a word of several syllables, it could serve to transcribe the syllable *por* in a general way, irrespective of the meaning. It could be used, for instance, in such words as "trans*por*ter", "col*por*teur", "*por*nographe", etc. This is the process used in the game of making picture-puzzles; if a person wishes to give the idea of the word "catastrophe" he draws the picture of a cat, of an ass, and of a trophy.

But that which is only an arbitrary phantasy in the game of rebus-making is strictly established by convention in phonetic ideography. This kind of writing, however, has two grave disadvantages. For the reason previously given the number of signs is necessarily limited, whereas the number of ideas is not. There are more ideas than signs, and it is therefore necessary to attribute conventionally several ideas to the same sign. As a rule the ideas included under the same sign are allied, or appropriate to, or typical of the main idea. Thus, in cuneiform writing, a disc represented not only the "sun" but also light, a flash, whiteness, day; in hieroglyphic writing an "eye" signified also sight, watchfulness, knowledge. Each of these ideas being expressed in speech by a different sound, the sign became enriched with as many new phonetic values. In cuneiform writing the same sign may represent from fifteen to twenty different sounds. This is what is meant when a sign is described as a "polyphone".

Conversely, every language will be found to contain some sound which forms a word by itself and yet represents many different things. Such, for example, is the sound *por*, which we mentioned further back, in the French words *porc*, *port*, *pore*, or the sound *vin* in the French words *vin*, *vingt*, *vint*, *vainc*, *sin*, in *saint*, *sein*, *sain*, *cinq*, *ceint*, *seing*, etc. An ideographic system naturally represents each of these words by different signs; which means, to continue with French examples, that for the sound *por* there would be three signs, for *vin* five, and for *sin* six. In cuneiform writing seventeen signs have been found to represent the syllable *tou*. This is what is meant when it is said that many signs are "homophones".

Homophony and polyphony represent two opposite defects which in practice ought to neutralize one another. Sometimes this does happen, but the examples cited above will give some idea of the often insurmountable difficulties which face those who would decipher them.[1]

When the Assyrians adopted cuneiform writing they modified the disadvantages of polophony by using supplementary phonetic signs; after writing the word as an ideogram they would indicate the pronunciation by writing the last syllable phonetically. This mixture of ideography and phonetism is a characteristic of Assyrian writing, and one of its difficulties, and was necessitated by the inherent defects of polyphony.[2]

Homophony has an equally grave defect, for it allows a choice of ideas to be expressed by the same sound. In order to remedy this defect, the procedure of providing *keys* was invented. A *key* is the complementary sign added to the phonetic ideogram to indicate its precise meaning. Instead of indicating the true pronunciation of an ideogram by a complementary phonetic, the key makes it possible to indicate which among several homophones is the right one. Let us make use again of the preceding examples, and imagine an ideogram to represent the sound *por*. In order to avoid all ambiguity this ideogram would be combined with the particular sign indicating that the reference is to an animal (*porc*), a seaport (*port*), the carriage of something (*port*), deportment (*port*), or the pores of the skin (*pore*). This sign would thus provide the key to the riddle.

The most systematic and complete application of this method of procedure is exemplified in Chinese. We have already mentioned how much better Chinese lends itself to ideographic writing than other languages, owing to its lack of inflection. In order to neutralize the disadvantages of homophony there are, in Chinese, certain exponents (radicals) which must be combined with the phonetic ideogram (phonetics) whose function is to indicate the meaning of the word. There existed for a long time an indefinite number of such radicals, but in

[1] On the history of the deciphering of cuneiform, cf. J. Menant, *Les écritures cunéiformes*, Paris (1864). The great names associated therewith are Grotefend, Eug. Burnouf, Chr. Lassen, H. Rawlinson, Oppert. For hieroglyphics Fr. Champollion, jun., was the pioneer; he was followed by Ch. Lenormant, de Rougé, Salvolini, Lepsius, Birch, Brugsch, and Maspéro.

[2] Cf. Fossey, **LXXII**, vol. i.

1616 two hundred and fourteen were adopted definitively. They are denoted in Chinese by the term *pu*, which signifies "sort" or "class". They are, in fact, determinatives which express general ideas, social and natural classes, and spiritual categories. Chinese characters are thus composed of two elements: the first, the so-called "phonetic", an ideogram which has become a phonogram, expresses the syllabic sound of the word; the second, the so-called "radical", gives the key to the riddle by defining the meaning of the word.

Cuneiform and hieroglyphic systems of writing were first invented for inflected languages, and the words consisted of several syllables. Thus, the process which made it possible to perfect Chinese writing did not effect much progress.

It is certain, however, that when the Egyptians invented determinatives, they obtained the equivalents of the Chinese "pu". The hieroglyph read as *ankh*, for example, may signify "life" or "ear"; but when it has the latter meaning it is accompanied by a picture of the ear, which serves as a determinative. Even at the time when Egyptian writing had become purely phonetic, determinatives, traditionally preserved, were occasionally used. As for cuneiform writing, it never ceased to ambush a number of ambiguities, even at the period when it was most extensively employed. In order to render it of practical value, it had to be turned into syllabic writing, and, as such, we find it used to transcribe Old Persian, one of the Indo-European languages, in the inscriptions of Darius. In a general way, however, it was the least living of all forms of ideographic writing, and the cuneiform of the Achæmenidæ was its final effort. It was soon replaced everywhere by systems of phonetic writing, notably by Aramaic, derived from the Phœnician alphabet.

The Phœnician alphabet, as it appears on the stele of Mesa (in the Louvre) dating from 900 B.C., is considered by some to be a derivative of hieroglyphic writing. But this transformation took place slowly, by way of numerous intermediate stages. We have already described how a natural evolution involved the modification of the ideogram into a phonogram. Certain forms of writing, like the Chinese, have remained midway between the two, thanks to a system of skilful combinations. It was inevitable, however, that the hieroglyphic system, above

all when it was transcribing an inflected language, should more or less rapidly develop into a phonetic script.

Syllabism was first affected. This stage is interesting, in that it emphasized the importance of the syllable (see p. 53). It should be pointed out, however, that syllabism itself is a result of the evolution of ideography—in a monosyllabic language, of course, since each word is a syllable. In other languages the same result was brought about by the fact that each ideogram had been used to designate only one of the syllables (generally the first) of the word it represented. That is why, for example, the names of the letters in the Semitic alphabet are those of specific objects whose names begin with the letter in question; this is likewise the case in the Irish ogham alphabet. Division into syllables has also the advantage of brevity. It marks, with great precision, the initial consonants of the syllables, and is quite adequate for languages which have no consonantal groups, and in which the timbre of the vowel can be determined morphologically, as in Semitic. Thus, in many cases, this intermediate stage may be definitive. In Semitic, the vowel sign was added comparatively late, when the language was spoken by people who knew it imperfectly only.

Syllabism also existed in the Far East. From the Chinese script the Japanese, after various experiments which need not be detailed here, adopted in the ninth century a syllabary containing forty-seven elementary signs taken from Chinese ideographs, and called *katakana* (= side-characters); but they are very far from using it exclusively. Their present system of writing is a compromise between Chinese character and syllabic writing. On the other hand, the Koreans have frankly adopted, as their national writing, a syllabic system of Aramaic origin (see p. 328).

Cypriot script must also be classed among syllabic systems, and it has been successfully deciphered, thanks to the fact that it was used for transcribing Greek;[1] and it is chiefly Greek texts that we have in this script. Its origin is unknown, but it is certain that it was not invented for Greek, which it transcribes in very imperfect fashion. In Cyprus itself it has been replaced by the Greek alphabet.

[1] Cf. Breal, "Sur le déchiffrement des inscriptions chypriotes" (*Journal des savants*, Aug.–Sept., 1877).

An alphabet represents the final stage in the perfecting of writing. It grew out of the need for indicating the vowels without increasing the number of signs in the syllabary. The Semitic syllabary had to be provided, at a certain period of its history, with vocalic symbols, *matres lectionis*, in order to facilitate reading. In the Greek alphabet the principle of the *matres lectionis* was skilfully used for the creation of a special sign for each vowel. Renan wrote that " the alphabet is a Semitic invention ".[1] It is possible. To-day, however, we do not adhere so firmly to the old doctrine that the Greeks got their alphabet from the Phœnicians. M. Dussaud,[2] for instance, has suggested that the honour of the invention of the alphabet should be attributed to the Ægean civilization represented for us—very poorly moreover—by the Cretan monuments. The Greeks may just as well have obtained their alphabet from the Ægeans as from the Phœnicians. In any case, the Phœnician alphabet obviously influenced the Greek, as is proved by the names of the Greek letters (cf. especially, Herodotus, v, 58, who calls the letters *Φοινικήια γράμματα*). The Greek alphabet, perfected by the Ionians, soon spread uniformly all over the Greek world. Subsequently the Greeks carried the alphabet to the west. It reached the Latins and the Etruscans in Italy via Cumæ, a colony of Eubœans of Chalchis. It spread up the Rhone valley as a result of the founding of Marseilles, and as late as the beginning of the Christian era Gaulish inscriptions are found there, written in Greek characters.

In the East it was Aramaic which spread the use of the alphabet, enjoying a rôle of considerable importance due to the circumstances of history. The part played by Aramaic was favoured by the transformation taking place in writing. Just as the Egyptian hieroglyphic writing, owing to the use of papyrus and the need for a notation that could be written quickly, was transformed first into hieratic, then into demotic, so, likewise, had Phœnician taken a cursive and practical form in Aramaic ; its angles were rounded off, the heads of the letters disappeared, and the strokes ended in curved tails. The Aramaic alphabet spread to India, and most of the systems

[1] **CXI**, p. 114.
[2] *Les civilisations préhélleniques dans le bassin de la mer Egée*, 2nd ed., p. 434.

of writing used in Central Asia were derived from it. Finally, it reached the Far East, since we can still trace it to-day in Korean writing.

Alphabetic script, the last stage in the evolution of writing, was to spread all over Europe from the beginning of the Christian era, thanks to the Greeks and Romans.

This can be explained historically by the propagation of the Christian religion. The apostles of this faith who preached it to the pagan peoples taught them at the same time to read the holy scriptures and, for this purpose, they were obliged to devise alphabets on the model of the one they themselves used. Hence, the Greek alphabet served as a model for the Gothic, thanks to Ulfilas, and for the Slavonic, thanks to Cyril and Methodius. It was from the Latin alphabet, on the other hand, that Old German, Old English, and Old Irish were derived.

We know in a general way how the particular forms of the alphabet mentioned above came into being. Ulfilas, for example, began by selecting from the Greek all the letters which denoted sounds existing in his own tongue, and retaining their original value. To the other sounds he applied the remaining letters, with varying degrees of success. Thus, the Greek Ψ was employed for transcribing the spirant dental surd and the Θ served to denote the sound *hw* ; where necessary, he even had recourse to the alphabets of other languages. Thus, the Gothic *F* is undoubtedly borrowed from the Latin alphabet, and two signs in it have been adopted from the old Runic alphabet. Analogous facts could be cited for the history of many other alphabets. The Greek alphabet, in particular, shows that the Greeks took similar liberties in adapting the so-called Phœnician script to their language.

In any case, there is an essential difference between the alphabets derived from the Greek and those derived from the Latin. The first were formed with remarkable precision by men who possessed a very accurate sense of phonetic relations, and who displayed rare perspicacity in transcribing fine shades of pronunciation. The Gothic alphabet of Ulfilas is an admirable instrument, exact and precise ; the Slavonic alphabet of Cyril and Methodius is a veritable masterpiece. What a difference between these and the alphabet of the Anglo-Saxons or the Irish ! The latter have striven for centuries to find some means of adapting the Latin alphabet to their language, and have never succeeded.

The fact is, of course, that the Latin alphabet is really inadequate for the purposes to which they endeavoured to put it. The phonetic systems of the two languages were as different as they could well be. Latin has a large number of occlusives, sonants, and surds; Irish, on the contrary, is a language of spirants. Besides, Irish had a greater variety of sounds than Latin. The Irish script was established little by little, in fragmentary fashion at the cost of much experimenting and by a succession of unrelated half-measures. It almost invariably requires some interpretative effort on the part of the reader. It is as the poles asunder from the Gothic script, conceived as a systematic whole by its author—who, however, does not deserve all the credit of its success. If Ulfilas was successful where the Irish monks made shipwreck it was because he worked over better prepared ground. Gothic, as we know it, presents a beautiful grammatical regularity which betrays a common language that has been stabilized and standardized. Irish, on the contrary, at the very time when the effort was made to transcribe it, was in a state of indescribable chaos. A similar comparison can be drawn between Old Slavonic, and Old German, or Old English.

CHAPTER II

The Written Language and its Spelling

MAN has never failed to appreciate the importance of written language. Originally, it was attributed to divine inspiration. The Hebrews believed that Moses had received it direct from God; the Egyptians attributed it to their god Thoth (Plato, *Phædrus*, 274); the Greeks considered the invention of writing quite as important as the practice of agriculture or the discovery of fire, and raised Cadmus to the rank of Triptolemus and Prometheus.

However, it must not be supposed that primitive man was impressed because of the usefulness of the invention, or because he divined the service it would render to his descendants; it was because he saw in writing a mysterious process whose formidable character laid hold of the imagination. Writing meant knowledge, and knowledge had always inspired men with fear; not without reason, for it enables its possessors to do evil as well as good.

The first men who used writing employed it for semi-magical operations. Writing was originally a kind of magic, and written language for a long time preserved this character. To inscribe a name upon a sheet of bark or an animal skin was to hold in one's power the person named; it meant that he could be constrained and controlled; that one had power to make or mar him at will. The first written lines containing the name of a person were incantations; propitiatory or healing formulæ, charms or witchcraft. If the uttered word can possess magical virtues (see p. 185) how much more so the written word? Hence, the first writers were sorcerers. Writing and fate, among many peoples, are synonymous. To the Celts and the Germans writing was a "mystery" (Gothic *runa*), a system of magical practices.[1] The wood upon which letters were engraved served also for witchcraft. The two ideas are still confused at the present time in the Irish and Breton vocabularies. While *Buchstabe* (literally "beech staff") is the term for "letter" in

[1] Neckel, "Zur Einführung in die Runenforschung" (*Germ.-Rom. Monatschrift*, vol. i, 1909).

German, the Irish *crann-chur* (" throwing the wood ") stands for " fate ", and the Welsh *coel-bren* means literally " divining-wood ".[1]

Even when it had been stripped of its magical character, writing still retained its aura of fear and respect, and men have persisted in their superstitious awe of the written word. Religion and law have utilized this sentiment for imposing upon our minds the letter of the word that is unchangeable, and often so much at variance with the spirit. We still repeat, " It is written," or " It was written ", as if we possessed the Oriental mentality which conceives the destiny of man to be inscribed in a Book of Fate whose pages can never be turned back. It is natural that we should attach a great deal of importance to the written word, for it persists when the spoken word has long since departed. If the word that falls from the lips becomes crystallized in writing, it is there for ever, like an incriminating document, and one is accordingly condemned " on the written word ". Writing is no longer a magical bond, but it is a bond, nevertheless.

Thus custom agrees with tradition in upholding the contrast between the spoken and the written language. They were never really confounded. It is a mistake to imagine that a written text can be an exact representation of the spoken word. Contrary to the opinion of many people, we never write as we speak ; we write (or attempt to write) as others write. The least cultured people have the feeling directly they take hold of a pen that they are making use of some special language different from the spoken tongue, which has its rules and customs as well as its own purpose and significance (see p. 271). And this feeling has its justification.

The written language is the most characteristic expression of the standard or common tongue which, by definition, is in conflict with the spoken tongue ; the latter, continually yielding to individual influence, constantly tends to depart from the ideal norm represented by the standard language. The written tongue is accordingly exposed to attacks from the spoken language, for the common language finds in writing its greatest stronghold of resistance. On the other hand, writing serves also to express many special languages. There are even

[1] J. Loth, " Le sort et l'écriture chez les anciens Celtes " (*Journal des Savants*, Sept., 1911, p. 403 ff.).

some special languages which exist only in written form. In this respect, also, there is a constant disagreement between speech and writing.

This disagreement becomes obvious as soon as we consider orthography. There is no people that does not suffer more or less from this discrepancy, and we know that French, like English, is particularly afflicted in this respect. The plight of orthography is considered by certain Frenchmen to be a national calamity.[1] It is important to inform ourselves of the extent of this evil, the causes which have provoked it, and the remedies to be applied.

In order to postulate the problem correctly, we ought first to ask how far spelling is capable of lessening the discrepancy between speech and writing, and up to what point the written word can represent pronunciation. Some orthographies owe their complexities to this very desire to specify to the reader exactly how the words should be pronounced. These complexities are often of foreign origin. The care with which writing transcribes sounds is, then, due to the extension of a language among people who have not spoken it from birth. Thus the use of accents in Greek words was developed in Egypt, where Greek was spoken by non-Greeks who had to be instructed as to the position of the accent in the word. It was the same in Ethiopia where the people began to vocalize a Semitic writing when Arabic was introduced. The earliest Ethiopian texts are in Sabæan writing, which had no vowels. Ethiopian is the first of these Semitic forms of writing which attempted to indicate the vowels, this being indispensable to a people who were unaccustomed to the complexities of Semitic morphology. It was a genuine improvement, whereby writing became a more faithful reflection of speech.

And yet no orthography has ever exactly reproduced the spoken language. Let us imagine a so-called phonetic spelling enriched with varied characters, and provided with diacritical marks ; it would never enable anyone who had never heard the

[1] Cf. especially : Arsène Darmesteter, " La question de la réforme orthographique " (*Mémoires et documents scolaires, fascicule* 73, Paris, 1888) ; F. Brunot, *La réforme de l'orthographe*, Paris (1905) ; L. Havet, " La simplification de l'orthographe " (*Révue bleue*, Mar. 11, 1905) ; M. Bréal, " Un dernier mot sur l'orthographe " (ibid.) ; N. Grammont, " La simplification de l'ortografe française " (**XVII**, Nov.-Dec., 1906, p. 537 ff.). A complete outline of the question is to be found in Dutens, **LXIX.**

language spoken to pronounce it correctly. As a rule, in phonetic treatises, the description of the sounds does not set out from man's vocal apparatus, but is referred to some language known to the reader. This is simpler and more precise. We say that a given sign represents the soft English *th*, or the Parisian *r*, or the hard *ch* in German ; or better still, that a certain vowel in a given word is the French *a* of a certain word pronounced in Parisian fashion. So much the worse for those who have never heard an Englishman, a German, or a Parisian speak !

This method is also inadequate. Even with the aid of exact phonetic transliterations in his own tongue, the reader cannot obtain an absolutely accurate notion of the sounds of a new language and succeed in pronouncing them. He must hear the language actually spoken. The spoken language is so complex that there are always a number of details of intensity, intonation, and articulation, which even the most perfect writing cannot indicate.

The idea of a phonetic spelling that would be applicable to all language is chimerical, because the varieties of pronunciation are so numerous that no manner of writing them can be more than approximately correct. This is evident in the attempts made to arrive at a uniform spelling for geographical names. One difficulty was insuperable—the written word always left a certain amount of doubt as to its pronunciation.[1] It has sorely perplexed the philologists even to establish a uniform system of transcription applicable to all the languages they study.[2]

If the principles of phonetic spelling could be carried to their logical conclusion, we should finally have to establish a different system of signs for almost every language ; for there are very few languages which have exactly the same vocalic and articulatory systems. English has scarcely any sound in common with French ; different signs would thus be required for English, and this would lead to an unlimited multiplication of orthographic signs. We might as well leave things as they are,

[1] Cf. Christian Garnier, *Méthode de transcription rationelle générale des noms géographiques s'appliquant à toutes les écritures usitées dans le monde*, Paris (1899).

[2] K. Brugmann, **XXX**, vol. vii, p. 167 ; H. Hirt, " Zur Transcriptionsmisere," **XXX**, vol. xxi, p. 145 ; Chr. Bartholomæ, **XXX**, vol. xxi, p. 336 ; J. Wackernagel, **XXX**, vol. xxii, p. 310.

since it will always be necessary, as we said before, to hear the language spoken in order to understand the value of the sign.

We may add that the most perfect system of spelling will ignore dialectal peculiarities, and that the special pronunciation of natives of Picardy or the Franche-Conté, for example, not to mention that of a native of Marseilles or Gascony, would not be indicated.

This is the first difficulty.

A second one lies in the fact that with the process of time and more or less rapidly according to the language, the spelling would become out of date. The main reason for crises in orthography, and the best evidence of the differences that exist between the written and spoken language, is the incapacity of spelling to keep pace with changes in the language. Spoken language is being constantly modified by evolution.[1] Written language, on the contrary, is by the nature of the case conservative, not only because it is the concrete expression of the standard language normalized by grammarians, but because it is unable to change as quickly as the spoken language. It is true that tradition is very strong when supported by the schools, by literature, and by the general agreement of cultured people. And yet tradition is not the only obstacle to changes in spelling. Stability is essential to written language, which represents an ideal language, standardized once for all, and incapable of alteration except when it is too late. However carefully we may attempt to take the rigidity from this unyielding garment, and adjust it to the lines of the body it covers, we shall never succeed in adapting it to nature's caprices, nor to make it grow along with the body—for it is a lifeless cloak hung upon a body that is alive.

We are sometimes astonished at the delay met with in adapting the highest standard of a language to the progress made in morphology or vocabulary of the spoken tongue. The Académie Française has doubtless not yet admitted expressions like *je m'en rappelle* or *de façon à ce que*, which have been in common use for a century. But this matters very little, for nowadays these expressions are fully sanctioned. This conservative tendency, however, is easy to understand. Many of the diverse tendencies daily manifested by the spoken tongue

[1] For the history of French pronunciation cf. Thurot, **CXXVI,** and Rosset, **CXII**; for English pronunciation, Ellis, **XXIII,** 1873–4.

are destined to be lost, and come to nothing, and, when a tendency is full of life, it requires time to attain its end. Even supposing it were transcribed on the very day that end had been achieved, this would already be too late, for the tendency has already been long in action. The same is true for spelling. No matter how correct and punctilious it may be, it can, in the nature of the case, only adopt such forms as have been tried and stabilized by usage.

It is difficult, however, for spelling always to be correct and punctilious. In this respect, languages differ from one another. We are sometimes justifiably astonished at the differences presented by languages like English and German, French and Spanish from the point of view of the value of spelling. German has a spelling that is certainly not bad : Spanish spelling is good. The French and English spelling is abominable—Tibetan and Irish alone could give it points. Celtic scholars have often quoted such ridiculous spellings as *saoghal, lanamhain, oidhche, cathughadh,* pronounced something like *sîl, lânun, î, cahu.* This might provoke the jealousy of the Frenchman who pronounces *oiseau* as *wazo,* or of the Englishman whose *enough, knight,* or *wrought* represents sounds which could also be written in English *enuf, nite,* and *rawt.* We must, however, plead extenuating circumstances for these unfortunate languages, since the discrepancies between their spelling and their pronunciation is generally due to historical causes.

We should remember first that the standard languages expressed in these orthographies were formed at a more or less early date ; that the phonetic evolution of certain languages is much more rapid than that of others and involves a more radical transformation in the pronunciation of words ; Italian and Spanish have remained closer to Latin than French, and English has completely upset the phonetic system received from Germanic. Above all we must remember that the conditions under which spellings were developed varied greatly in different countries. Many external and even individual influences reacted upon orthography. There was the influence, for example, of a reformer like the Welshman Salisbury, whose translation of the Bible (1567) became authoritative ; the habit thus adopted of writing *ei* to indicate the pronoun which had always been pronounced *i,* has been preserved till the present day. In Russia, the influence of the Old

Slavonic tradition—a religious language—was so strong that modern Russian still maintains the spelling *togo* for a genitive which is pronounced *tavó*. At the end of the sixteenth century French orthography was subjected to the influence of scholars imbued with classical traditions and etymological preoccupations. It is they who are primarily to blame for misdeeds whose consequences present-day French folk have to bear. But they were men of their age. Ireland was similarly unfortunate, for her spelling was fixed, as the result of much experiment, by pedants who were slaves to tradition. In Scotland, in the middle of the sixteenth century, Gaelic was the subject of an attempt to reform its spelling in the famous manuscript copied by Sir James Macgregor, Dean of Lismore (Argyllshire), between 1512 and 1526. Thanks to this book, we can judge of the discrepancy which existed at that time between the written and the spoken language. But we must not exaggerate the complexities of Irish spelling; they are in great measure due to an initial error, consisting in employing letters as diacritical marks to indicate the pronunciation of other letters. This gave a somewhat crabbed appearance to the writing but, with a little practice, one easily grows accustomed to it. The fact that we can read quite accurately certain very complicated Irish texts contemporary with the manuscript of the Dean of Lismore proves that traditional orthographies have some good in them, whereas, in the Dean's own writings, the significance of certain spellings escapes us.

This does not mean that Irish spelling is to be defended any more than French, encumbered as they both are with supernumerary and useless letters. The French language has suffered more than any other from the evil influence of pedants. Did they not attempt to write the word *sire* as *cyre*, under the false pretext that it came from the Greek κύριος? They have not been followed in this particular point, but it is to them that Frenchmen owe the writing of *poids* with a *d* and *vingt* with a *g*, although these letters have never been pronounced at any time in the history of the language, and in the first case this addition ran counter to etymology; *poids* comes from *pensum* and not from *pondus*. It was they who restored letters which had long ceased to be pronounced. Ill luck has brought it about that these supernumerary letters have found a place in the pronunciation. To-day, the *s* in *festoyer* is sounded, despite

fête; we hear *cheptel*, *dompter*, *sculpteur*, *promptement*, pronounced with the group *pt* unduly emphasized, by people who pride themselves on the elegance of their speech. There is even worse. Under the influence of the verb *léguer*, the old word *lais* from *laisser* was invested with a new uniform to which it had no right; it was given a *g* and spelt *legs*, and to-day most people pronounce this *g* as in the proper name *Leygues*. Orthography ends by upsetting vocabulary.[1] It separates *festoyer* from *fête*, and *legs* from *laisser*, but it attaches *forsené* ("beside himself") to *force* by writing it *forcené*. Sometimes it also upsets etymology. An unfortunate use of *ge* for *j* is responsible for the creation of the word *gageure*, which is nowadays commonly rhymed with *beurre*, although it is formed from *gager* with the suffix *ure*, like *piqûre* from *piquer*, or *mouillure* from *mouiller*. We should never come to an end if we were to enumerate all the evil effects of French spelling.[2] Recent discussions have enabled us to compile a list of them, which is only too long and too well known.

It is bound to become longer still. These orthographic crises depend upon the social conditions under which language is developed; in proportion as the discrepancy between literary and spoken French is increased (see p. 276) the mischief will become more acute. Many words still used in conversation will be definitely relegated to the written language; they will no longer be learned except through the medium of books; no oral tradition will maintain their pronunciation. Such words will have the same fate as the foreign words introduced by books into the language; French people say *rail* or *wagon* according to their form in print, applying a French pronunciation to the English spelling. But they say *bifteck* to-day because they owe this word to an oral tradition. Like *rail* and *wagon*, *gageure* is a bookish word, and that explains the transformation it has undergone. Books bring about a constant reaction of the written form upon the oral form of language.

In England, also, the discrepancy between the written and spoken language has long been evident. The English provincial methods of speech are all permeated by the literary language

[1] For analogous facts in German, cf. Behaghel "Der Einfluss des Schrifttums auf den Sprachschatz" (*Zeitschr. des deutschen Sprachvereins*, xviii, pp. 35–40, 68–76).

[2] A. Gazier, "L'orthographe de nos pères et celle de nos enfants," *Mélanges de littérature et d'histoire*, Paris (1904), p. 321.

introduced by books, and especially by newspapers. As among the French, the English provincial speech is often only literary language dialectalized (see p. 269). In turning a literary language into a provincial patois, however, mistakes are bound to creep in. Here, for instance, is a typical example; the word *light*, pronounced *lite* in the standard language, is still *licht* (*ch* as in German *ich*) in the north. By analogy, in this region, they might say *delicht* instead of *delite* for *delight*, which has an entirely different origin; or, combining the two processes, we might get *laicht* for *light*, another form of creating a false provincialism.[1]

The influence of writing upon pronunciation was even greater in German than in French or English, and this is due to the fact that standard German is primarily a written language (see p. 265). Moreover, when the standard language was in the process of development the pronunciation was constantly being regulated by the orthography which tended to establish a normal pronunciation, which was not that of any given province nor of any single social group. Usage aimed and still aims at making spoken German conform to the way literary German is written. For example, the diphthong *ie* in Middle High German has become long *i* without any change in spelling. But, as the chancellery of Saxony had at the outset written *je* for *ie*, this difference has been introduced into the pronunciation; hence the contrast between *jemand*, *je*, and *niemand*, *nie*.[2] But German has this important advantage over French and English; the pronunciation, once fixed, remains fairly stable. Among us, the literary tongue will suffer more and more from the growing discrepancy between itself and the spoken tongue.

We cannot but applaud the efforts of those who have attempted to remedy these disadvantages in orthography. Their reasoning in the matter is briefly as follows:—French orthography is a heterogeneous conventional system established according to the pleasure of a few pedants. Whatever convention has made, convention can unmake. Correcting the orthography does not imply any injury to the language; it means freeing it from an evil that has been eating into it; it

[1] W. Horn, **CLXIX**, p. 55.

[2] W. Braune, *Ueber die Einigung der deutschen Aussprache*, Akademische Festrede, Halle (1905).

means saving our children considerable loss of time, and making the acquiring of French easier to foreigners.

All these reasons are excellent, and we wish that they had met with universal approbation. A committee of competent scholars should be formed to report on the best means of remedying French orthography, just as physicians attend upon a person who is ill until his complete recovery. The work will demand time, for it must necessarily proceed very slowly. There are many reasons in fact, which render prudence advisable. We will indicate some of them.

Too sweeping a reform would have the result of substituting at one stroke a new written language for the familiar one. Apart from the trouble which a generation of two of Frenchmen would have in learning what would be practically two languages, we have to take into account the impossibility of making a sudden clean sweep of the printed matter published in France for many centuries. There are literary customs and traditions that cannot be changed with a stroke of the pen. Doubtless, it is imperative that French should be made easier and more accessible to the foreigner. Frenchmen who dream of a prosperous colonial future for their country, ought to think of the difficulties of their orthography, difficulties which are well calculated to dishearten a native of Central Africa or the Far East. But it would not seem that the difficulties of English spelling have hindered the prosperity of the British Empire, and it would not do to bring confusion into the customs of native Frenchmen in order to satisfy a few foreigners. We ought to recognize, furthermore, that the slightest change in orthographic rules upsets acquired habits to an extraordinary extent. There is not a page of French which would not be completely changed if even the minimum programme proposed by the reformers were applied to it. The eye would be continually arrested and thought would be tripped up by perpetual corrections that would speedily become maddening. It may be contended that it would only affect a generation or two, and that our grandchildren would no longer have to learn that which we had unlearnt. This contention is very plausible, but all the same these objections prove how prudently we ought to proceed in any reform of orthography.

In limiting ourselves to a progressive but exceedingly cautious plan of simplification, we should also be respecting the

canons of the written language, which must certainly also be taken into account.

Certain scholars are too much inclined to regard the written tongue as the humble servant of the spoken tongue. This is the view of phoneticians and teachers of living tongues, who feel constrained to protest against the exaggerations of schoolmasters to whom, on the contrary, the written tongue is the be-all of language. Is it actually necessary to say " this written word is pronounced thus, and that spoken word is written thus " ? Does the word exist in the sound issuing from the mouth or in the writing set down on paper ? The answer must be that for all civilized men it exists in both at the same time. Many cultivated people communicate with their fellows even more by writing than by word of mouth. Doubtless, if we were to go back to the beginnings of writing, we should have to start with the spoken tongue in order to build up the written tongue. When Ulfilas decided to write down the language of the Goths, he sought to find an adequate graphic representation for each sound in the language ; and in this sense it is right to say that writing followed pronunciation. It is the same nowadays, when a traveller transcribes a native language which has never before been written down. In the untutored mind the word has evidently only an auditory form. But from the moment when an alphabet comes into being and the study of reading is forced upon all the children of the country the written word assumes an ever-increasing importance.

Nowadays we do not think of language without its written form. Words present themselves to our minds in the garb which orthography has lent them. We may say that here the organ has created the function ; and what a function ! Such a tyranny that for many of us, who are described as visualizers, the written language has a great advantage over the spoken language in point of clarity. A certain character in Musset declared that he could not clearly understand anything but the slanting round-hand script. This amusing idiosyncrasy may be said to apply to many people. Some people scarcely understand a page they hear read, and can grasp it only when they read it themselves ; others derive no profit from a lesson which is being recited to them unless, at the same time, the printed outline is before their eyes. Such are obviously extreme cases,

and appear more striking by reason of their very infrequency. But each one of us will find, if he considers the matter, that he approximates more or less to this condition.

As a rule, when we are listening to a lecture the words strike our visual and auditory apparatus at one and the same time, in the sense that the effect produced upon the auditory centres is transmitted by reflex action to the visual ones. We thus see the words our ears hear ; and when we ourselves are speaking we see the words we are pronouncing. They spread out before our minds like the writing of an open book. The form which words take upon our lips is often determined by the aspect they present to our intelligence. An excellent way of avoiding mistakes in pronunciation is to refer to the visual form of the word, which always accompanies the auditory form in our minds. Conversely, the visual form is accompanied in reading by an auditory sensation ; we repeat to ourselves the sentences we are reading, and when we write our pen follows what the inner voice dictates. It may be said that in the linguistic expression of the normal civilized person all forms of language are in operation at the same time.

Written language, therefore, plays a very important part in the psychology of language. When teaching children to read and write, we must consider the laws underlying the written language, even if these are sometimes opposed to those of the spoken tongue. Such a conclusion does not exclude the possibility of a reformed orthography. It is quite natural that we should aim at reducing the discrepancy between the written and the spoken tongue. We must not forget, however, that a perfect equivalence between the two can never be attained, and since words exist as much in the written as in the spoken form it is perhaps not altogether unfortunate that orthography should have irregularities, excrescences, and blemishes. These but engrave the physiognomy of words the more indelibly on the memory. The peculiarity of their dress expresses the idea enveloped all the better.

Voltaire once said, " Writing is the portrait of the voice ; the greater the resemblance, the better it is." That is true only in theory, and as a principle of method in connexion with the writing down of a new language. In a language like French, we should be unduly restricting the range of writing by making it the mere image of the spoken word. The written language

was undoubtedly born of a convention established by a few persons. But this convention has spread to the whole of society, and is imposed with tyrannical rigour. Our social life is not regulated by reason, but by custom, and philosophical reasoning is vain against the power of custom. When we desired to obtain a little more daylight for work, it would have been rational to change our daily time-tables, but not the hour ; and yet it was the hour that was changed. We consented to dine at six o'clock upon condition that six o'clock was called seven—so completely are we the slaves of our social habits ! For all civilized men, spelling is one of these habits. We cannot hope to reform it unless we exercise great prudence, taking custom itself for our inspiration.

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CONCLUSION

The Progress of Language

WRITING is an excellent example of those implements created by man which the passage of time only enriches with the improvements imposed or suggested by custom. Great progress has taken place, and that not only in the material sense, between the days when the earliest signs were graven on stone and to-day when characters are printed on paper.

We are tempted to expect an analogous conclusion to the study of language, viewed as the outcome of the intellectual work of successive generations. Is there not also in our linguistic equipment constant improvement? Have the varied combinations of sounds formed by the mind for translating ideas realized no progress in the course of ages? Language never seems to stand still. Are we to look upon this flux as an illusory movement which expends itself in sterile efforts? Or does language tend towards an ideal end to which it approaches ever nearer at every stage in its evolution? We know the history of certain languages over very long periods. Often we see them changing with great rapidity. We are justified, therefore, in asking ourselves whither these transformations tend and in formulating our questions as to the progress of language in other terms.

We must be careful to define what we understand by the expression " progress of language ". Those who use it have too often introduced into linguistics an idea borrowed from literary history. We have long been accustomed to the idea of progress in literature as dogmatic; we could not conceive the evolution of literary forms other than as an advance toward perfection or as a process of decadence. This is the classic conception according to which art and taste reach their climax of perfection and then must needs deteriorate. Classical philologists, carrying this conception into the study of language,

have imagined that there was a climax of perfection, attained at the cost of long effort, in the history of Greek and Latin, beyond which these languages had only declined.

For Latin, Cicero served as the summit of perfection. Yet the critics took pleasure in discovering mistakes in his writings, and the letters he wrote to his friends were set aside as being negligible and unworthy of him. Real Latin was supposed to be summed up in a few discourses and philosophical treatises by the great orator: Cæsar's *Commentaries* and the *Lives* of Cornelius Nepos were somewhat grudgingly accorded the same respect. The other Latin writers, however, were either open to suspicion or frankly discredited. Lucretius was uncouth and careless, Plautus half-civilized and barbarous, Sallust guilty of archaisms, Livy provincial, Tacitus bizarre and crabbed, and apparently disposed to accumulate all the faults of the language for the sake of so doing. The writers of the Empire are appraised only inasmuch as they approach by servile imitation the arbitrary Ciceronian standard.

This manner of treating the classical languages—for Greek suffered in the same way—rests upon an unfortunate confusion between the language of literature and the language as it is used by all the inhabitants of a country and is modified with time. It is quite permissible for Latinists to set up a certain ideal for the Latin language and to impose it on those who write Latin exercises. It is the normal procedure of the dogmatic grammarian summed up in the formula that this, that, or the other is or is not said. In adopting it they are only following the tradition of the Latin writers who recognized in Cicero their master and their model. But this artificial procedure must not be applied to the study of language in general.

This, nevertheless, was what the philologists of the last century did, when they fixed an arbitrary standard of perfection for every language.[1] They set this ideal standard in the past—rather naturally in a very distant past—and made out that in some "primitive" epoch a perfect language—an absolutely regular language—had existed. Since modification and change is a law of language, it was inevitable that, in proportion as they developed, languages should diverge farther and

[1] Particularly Schleicher, **CXCVII**, p. 34; **CXCVIII**, vol. i, pp. 13–17.

farther from this primitive ideal. It was in strange terms that these philologists spoke of linguistic development—degradation, deterioration, degeneration! And as for our wretched modern languages, late comers which an evil fate had placed at the end farthest from the standard, they were treated with contempt. According to the expression of Schleicher, they were "worm-eaten debris".[1] The older the languages, the more respect did they inspire. There is a story of an old Hellenist, who, when he was consulted upon some question of modern Greek, peremptorily declined to give any opinion, declaring that he would never consent to learn a language where ἀπὸ was construed with the accusative.[2] He would certainly have commended Schleicher's dictum,[3] that history is an enemy of language (*die Geschichte, jene Feindin der Sprache*)—a nonsensical utterance, which would oppose to language the very life that nourishes it.

It is needless to add that any hypothesis of perfect language projected into the prehistoric past is as purely chimerical as the idea of an immutable language, frozen into immobility for all eternity. We must resign ourselves to accepting change, which is inevitable, and not indulge in regrets for a golden age, as vain in linguistics as in everything else. Besides, is there no advantage in change? This is precisely what another school of philologists maintains, taking the opposite point of view and transferring the linguistic ideal from the past to the future.[4] This school has taken upon itself the task of rehabilitating modern languages; it maintains that the most highly evolved languages are at the same time the most perfect. This merely rekindles the old quarrel between the Ancients and the Moderns by importing it into linguistic matters. This quarrel crops up anew every half-century, demonstrating the swing of the pendulum in affairs of human taste as between things old and things new.

Certainly modern languages such as English and French rejoice in an extreme suppleness, ease, and flexibility. French, especially, has the advantage of being precise and clear. Far from tolerating the licence, exaggerations, and pomposities

[1] **CXCVI**, p. 27.

[2] Modern Greek has ἔλαβα γράμμα ἀπ' τὸν πατέρα μου "I have received a letter from my father." Pernot, **CIX**, pp. 180 and 444.

[3] **CXCVIII**, ii, p. 144; cf. Jespersen, **CXXXIV**, p. 8.

[4] This school is brilliantly represented by Jespersen, **CXXXIV**.

approved in certain neighbouring languages, it ever seeks for that precision which, as in Voltaire's phrase,[1] renders gloss or explanation unnecessary. But can we maintain that the classical tongues like Greek or Latin are inferior to it? And if we had to choose among them the language to which the palm is due, who would dare to leave out Greek? It is a language whose very essence is godlike. If we have once acquired the taste for it, all other languages seem insipid or harsh after it. It is not a matter of the ideas this language has served to express or of its literature, which is an education in wisdom and beauty—a "treasure-house of balm for the spirit", as the Egyptians said of their books. The outward form of the Greek language is in itself a delight to the soul. The harmony of its rhythm, the grace of its sounds, and the richness of its vocabulary even, are not the most precious of its qualities. In the grammatical field, Greek is distinguished above all other languages by the precision of its morphemes which renders the word-formation so lucid, and the graceful suppleness of its syntax which gives to every thought its full value, following its every movement and reflecting each fine shade in its transparent depths. Never has a more beautiful instrument been fashioned to express human thought.

But the fact that languages of quite different type have sufficed to express the varied needs of thoughts equally rich and exacting, shows that one must not seek the ideal of perfection in any special type of language. It may be amusing to try to prove that the language of Homer, Plato and Archimedes is inferior or superior to that of Shakespeare, Newton, and Darwin. All of them have perfectly expressed what they wished to say, although by different means. Their merit is equal, since each, in his own language, found adequate expression for his thought. In fact, no language has ever failed the man who has really had something to say. We need pay no attention to the unskilful writers who have held their language responsible for the failure of their work; the fault is generally their own.

It is evident that a writer has rare good fortune when he has a tradition to follow, and can use a language already fashioned and perfected by generations of great writers. But it is merely a question of degree in difficulty. Descartes said in his *Discours de la Méthode*: "Those who reason most cogently, and best digest their thoughts in order to render them clear and intel-

[1] *Essai sur le poème épique.*

ligible, are ever best able to convince, no matter whether the language they speak in is only Bas-Breton."

Nevertheless, the writer's ability is not the only factor that counts; his environment must also be taken into consideration. Whether he speaks or writes, in order to be listened to or read he must find a public sufficiently cultured to understand him. "It is only in enlightened ages," says Buffon, "that men write and speak well." Imagine a Breton who wishes to write a philosophical work in his own language; he will succeed, no doubt. But unfortunately the Bretons, at least those who are most Breton, are not in the least interested in philosophical questions; no more so, indeed, than philosophers are able to understand the Breton language. Our Breton philosopher, therefore, would run the risk of being neither understood nor read. The carrying-power of a language depends upon the number, and degree of culture, of those who use it. That is why the Celtic languages have less value than the Romance or Germanic tongues. Yet, for several centuries, Irish and Welsh were used as the vehicle of beautiful and poetic thought, the most original perhaps, that the Middle Ages produced, and one may be permitted to regret that Dafydd ab Gwilym did not write in Italian like Dante, or in German like Wolfram von Eschenbach: more people would then have been able to enjoy his poetry. But to what does this lead us? On the day when Greek is no longer taught in the schools, where will the glory of Homer and Plato be? The croaking of the crow is as melodious as the song of the nightingale, when there is none left to hear.

To push the preceding argument would merely lead us to an impasse. The æsthetic or utilitarian value of a language must not be taken into account in estimating the progress of language. The talent of its writers, in a period of intense literary activity, national prosperity, and political hegemony, may confer upon a language a sort of semi-absolute perfection, and hence a world-wide prestige. This is what happened to the Greek of the Attic period, the Latin of the Augustan age, and the French of the seventeenth and eighteenth centuries. But the question of the general progress of language is one apart from any momentary perfection in some particular language. The idea of perfection is indeed so foreign to the appreciation

of progress that we should not be justified in applying it to any particular phase of a language, such as, for instance, its sounds or its grammatical form.

Some languages are more harmonious and fluent than others, and some are easier than others to pronounce; phonetic modifications, however, are in no wise determined by the desire to give pronunciation certain qualities it may lack. Furthermore the appreciation of these qualities is in large measure a matter of personal taste, and accordingly introduces into the discussion a subjective element which is false in principle.

With regard to morphology, if we restrict ourselves to grammatical structure, it is equally difficult to justify the idea of progress.

A doctrine greatly in favour forty years ago, taught that there were three stages through which languages must pass: the isolated, the agglutinative, and the inflectional stage. It was considered that every known language, at the moment of its evolution known to the student, was in one of these three stages. And thus a morphological aspect of the progress of language was outlined.[1]

From what has been previously said about morphological modifications and the relations between words and morphemes, we can estimate how great is the fallacy in this conception of the history of languages. Doubtless grammatical elements are often the result of old worn-out independent words, and we can sometimes find in the vocabulary the origin of certain suffixes or even word-endings that, in the course of time, have become part and parcel of the words they modify. This agglutination of originally isolated elements enables languages to renew their morphology. On the other hand, phonetic wear and tear often reduces the length of words, destroys the inflection, tends to reduce polysyllabic words to monosyllables, and thus revives the isolation stage.

These different "stages", however, are the result of modifications taking place at the same time in every language, which influence the morphological system at every point, and whose momentary success or otherwise, is determined by particular conditions in each language. Further, the

[1] Cf. especially Hovelacque, **LXXXIV**; Misteli, **CLXXXII**; and Sayce, **CXXXVIII.**

transformation is never complete ; the earlier forms often live side by side with the new ones, so much so, that in a highly evolved language with a long past, such as French or English, different types representing these three different so-called " stages " are to be found combined in the general system.

Thus the monosyllable has sometimes been considered as a characteristic English feature. It is a fact that Modern English shows short forms, often reduced to a single syllable, where the Old English forms were burdened with syllables and weighed down with suffixes and word-endings. This is the result of phonetic wear and tear, much in evidence in English. The language could have reacted against this wear and tear as well as any other. The Romance tongues, for example, repair this monosyllabism by the addition of suffixes. Thus the French say *soleil* where the Latin had *sol*, and have substituted the verb *gémir* (*il gémit*) for the old verb *geindre* (*il geint*). In Spanish there are practically no monosyllables.

However, we must not exaggerate the monosyllabism of English, which is often only apparent.[1] We must not allow ourselves to be deceived by writing or by habits imposed by grammars and dictionaries. Among those English words which are separate, according to grammatical analysis, there are many which have no independent existence ; a number of them are simply morphemes or exist only in certain combinations where they are indissolubly linked to other morphemes. A sentence like *I don't know* does not really contain more words than the Latin *nescio*. The element *know*, the most significant part of it, is never used by itself. Nor have the other words a more independent existence ; they are grammatical instruments having no independence in themselves, and existing merely as elements in autonomous groups. On the other hand, the monosyllabism of native English words is largely compensated by borrowings from Latin and French. It is well known that English is noted for its readiness in assimilating foreign words that it judges useful or suitable. This habit permitted it to neglect its own vocabulary as a source for new words ; and whereas it leaves intact any number of monosyllables inherited from its own ancient sources, without the addition

[1] Jespersen, **CXXXIII**, p. 10.

of suffixes or increase of adventitious elements, it has borrowed French and Latin polysyllables wholesale.

The contrast of an inflectional with an isolated or agglutinative state becomes illusory, moreover, in regard to the verbal image, where these various states are co-existent in a synthesis which mutually reconciles them. We speak in sentences and not in isolated words. The difference between different languages lies in the position occupied by the morphemes, and in the nature of the link uniting morphemes and words. This is an accidental and not a fundamental difference. We could not deduce from it any principle of classification for languages, still less does it furnish the means of appraising progress in language.

We must, in addition, never forget the precarious nature of all linguistic innovation. There is nothing permanent in linguistic acquisitions which can assure definite advantages to the language obtaining them.

The gains are always ephemeral, and, as a rule, counterbalanced by losses. We have seen how French supplied itself with an interrogative particle; a happy combination of fortuitous circumstances was necessary to insure life, force and development to this particle. And without any great risk of error we may suppose that in the nature of things this particle in its turn will lose its present expressiveness, and will finally drop out of the current language. This is the history of all linguistic formations. We know how the Latin interrogative particles, themselves so expressive and convenient, came into being and perished. *Num vides* (d'you see?) pronounced in an interrogative tone, became the interrogative formula expecting an answer in the negative. *Videsne* (don't you see?) likewise acquired the value of an interrogation which would receive an affirmative answer. This was a valuable gain for Latin, but it did not last. It disappeared because phonetic wear reduced *num* and *ne* to a worn expressionless condition. Progress, if we may use the term, was therefore only transitory.

Nor can the losses a language undergoes be better explained as progress. It is unfortunate that modern French should have reduced to a single tense both its past definite and its past indefinite; there was a real difference between them, and by their use delicate shades of meaning could be expressed which

have now disappeared for want of expression. We know that the cause of the disappearance of one of these tenses (generally the past definite) was that the two tenses became equivalent, and the reason for this was that the past indefinite (of the type *j'ai fait*), primarily a compound tense, became simple and lost the periphrastic value in which the auxiliary verb was still felt. It is possible that as the language suffers from this poverty of expression it may eventually experience the need for remedying it, and will one day come to distinguish by a new process the simple narrative, formerly expressed by the past definite (*il fit*), from the perfect, formerly expressed by the indefinite (*il a fait*). In the meanwhile, however, the French language is the poorer for the loss of a useful element. No one would maintain that the disappearance of the imperfect subjunctive is equally regrettable. Nevertheless, this tense was often very useful. It brought a reinforcement to the French verbal system, and completed its series of tenses. Regret for its disappearance would be superfluous, nevertheless. Despite the efforts of the schools to preserve it, it has disappeared, a victim of tendencies which the human will has no power to arrest.

Thus by drawing up a balance-sheet of profit and loss on morphological evolution, we do not find that the idea of progress as such can be associated with it. Every modification language undergoes has an individual aspect only. The same language, at two different periods of its history, doubtless presents two very different aspects ; the elements of which it is built up are changed, displaced or reversed. But as a whole the total gain and total loss very nearly balance each other. We have already explained why a language can never, by natural development, arrive at the logical perfection artificially given to ready-made idioms (see p. 162). The different aspects of morphological evolution remind one of the changing images seen in a kaleidoscope, which one may go on producing indefinitely, changing the combination but never the sum of the elements of which the combinations are composed. All depends upon the hand that manipulates it.

Linguistic evolution is directly dependent upon historical circumstances ; there is an obvious relation between linguistic evolution and the social conditions under which language evolves. The development of society leads language along a definite

path, and we are therefore right in seeking in the history of languages a reflection of the history of civilizations. From this point of view the question of progress in language takes on a different aspect, and it is this aspect which must now be considered.

It has often been observed that languages evolve in proportion as they spread abroad and are spoken by greater numbers and more widely differing peoples. When they extend to regions where they come in contact with other languages they become liable to lose their most idiomatic qualities, and the influences operating upon them are likely to modify them rapidly. Thus, if we compare the dialect of a colony with that of the home-country, we shall often observe in the former the disappearance of certain subtle grammatical distinctions. Tradition maintains them on their native soil, but they do not survive transplantation. The difference between *I shall* and *I will* no longer exists in the English spoken in America : *I will* alone is used for the future.

On the other hand certain tendencies inherent in the language will often come to maturity more rapidly and more completely when the language is introduced into a remote country. Thus certain innovations have appeared more quickly in the French spoken in Canada than in western France, whence the French emigrated to America in the seventeenth century. In some respects, Canadian French has the air of archaic French ; but in others it is in advance of that used in France, in that it has divested itself more rapidly of certain moribund features which the latter has maintained by tradition.[1] Similarly, the Dutch spoken by the Boers is more highly evolved than Netherlands Dutch.[2]

As a rule, languages that do not travel are conservative. Those spoken within definitely limited areas, far from cosmopolitan centres and the great routes of communication, are often remarkably archaic in character. Lithuanian, for example, the rural language of a poor forest region, cut off from the great European nations, is the most archaic of all the Indo-European tongues. Languages are best preserved in mountain regions or at the extremities of peninsulas where outside

[1] Geddes, " Study of a Canadian-French dialect " (1908), quoted by Meyer Lübke, *Germ.-Rom. Monatschrift*, vol. i, p. 133.
[2] H. Meyer, *Die Sprache der Buren*, Göttingen (1901).

influences are few. It is thus that Basque, among the valleys of the Pyrenees, and Breton, lying close to the Ocean, have been preserved.

Habitat, likewise, has its influence. When a population is thinly scattered over the countryside, dialectal differentiation is promoted. On the contrary, if the population lives at close quarters in villages and towns, this mode of life facilitates the creation of standard languages, which provide a sort of mean between the languages of the different social classes contained within the village or town. Thus not only does social action retard or precipitate the evolution of languages, but even determines the way in which this evolution is to take place. All that we said a while back with reference to the relation between standard languages, dialects, and special languages will serve in illustration of this general principle.

Even our mental activity is ruled by social causes. When the history of a language embraces a long period of time we can recognize the effect social evolution has upon human mentality. For example, it has been observed that languages exhibit a general tendency to lose their mystical character and to become more and more intellectual, to abandon the concrete in expression for the abstract. In its earliest form the grammar of Indo-European languages was much more subjective and concrete than it became later. The category of tense appears in Indo-European under the more subjective aspect of duration ; in the course of ages, tense properly so-called—that is to say, the idea of the actual moment of time—was envisaged more and more clearly in the expression of these languages.

An examination of the languages of uncivilized peoples confirms the teachings of history. These languages represent a linguistic condition in which what we call civilization has taken either little or no part. They abound, therefore, in concrete and special categories, and are thus strongly contrasted with our cultivated tongues where these have almost vanished, and in which there is an increasing tendency toward purely abstract and general categories. The savage expresses with rare precision a mass of material details that escape us ; and he pays even closer attention, for example, to spatial considerations than our languages do to temporal ones. An act presents itself to his mind as confined within a certain area of space, and

the spatial relations between persons and things are as definitely marked in his language by special categories as are temporal relations,[1] or more so. Still, time is a higher degree of abstraction than space. We civilized folk abandon the concrete notion of space in the morphology of our languages and are more desirous of expressing the abstract notion of time. This is a fact of civilization.

The very way in which the concrete categories disappeared from language confirms the importance of the rôle which civilization has played. One of the most striking cases is that of the dual in Greek (see p. 97). The use of the dual in different dialects was in proportion to the degree of culture; those dialects which had lost this number from prehistoric times were the very ones spoken by the most cultured people. The dialects of the colonies, for example, were in advance of those of the mother-country; the same dialect preserved the dual in continental Greece and lost it in Asia Minor and the Archipelago. This is a general rule and practically without exceptions, apart from certain dialects like the Attic, where special and secondary influences were at play, which, moreover, confirm the rule when properly understood. The home dialects, as we have said before, are more conservative than the colonial ones, which represent the language of the élite of the Greek cities, the most active, intelligent, and virile element of the nation. It was in the colonies that the fruits of civilization, especially in regard to literature, were first made manifest. The preservation of the dual appears thus as an evidence of stagnant civilization, and its disappearance, on the contrary, an indication of a civilization at once more alive and more advanced

We must not exaggerate the importance of the evidence taken from the Greek languages, since other causes of a purely linguistic character also explain (see p. 294) why the disappearance of the dual took place earlier in the colonies than in the home cities. The evidence of Greek, however, does not stand alone; it is confirmed by the history of most languages, even those outside the Indo-European group. The same method of eliminating the dual is to be observed in Semitic and Finno-Ugrian. The earliest developed languages of the Semitic

[1] **LXXXVIII**, p. 153.

group, the old languages of civilization, such as Assyrian, Hebrew, Aramaic, and Ethiopian, have the dual only in certain words, signifying the organs that occur in pairs. Arabic, which up to the seventh century A.D. was a language of nomads in a backward stage of civilization, kept it in the noun, pronoun, and verb ; it may even be said that in the course of the history of Arabic the degree of civilization determined the degree of preservation of the dual. In the Finno-Ugrian group, the only tongues to preserve the dual were the two least-developed dialects, Wogulian and Ostiak ; neither Hungarian nor Finnish has a trace of it left. And if we descend in the scale of civilization, we shall find languages like those of certain American and Australian tribes which possess a triple number.[1]

In thus studying the psychic operations which have produced language, we do not, of course, consider the grammatical conditions under which it was formed. The two things must be carefully distinguished. An absence of abstract ideas expressed in language does not exclude grammatical complexity. There is no connexion between the nature of the mental categories and the number and complexities of the grammatical categories. The latter depend primarily upon memory. Among primitive peoples memory is generally rather highly developed, for imperative need and vital necessity force them to develop it. Their mental activity is not aided by the many devices which civilized peoples can so easily substitute for memorization and thus let their memories grow idle with no practical inconvenience to themselves. The influence of memory upon the development of language does not appear to have been studied. Nevertheless, the fact that certain uncivilized languages fairly bristle with diversified forms, which are maintained for long periods, and possess morphologies of unparalleled complexity and vocabularies of disconcerting richness, is evidently bound up with a special development of memory. Memory is naturally conservative. It is not in grammatical structure, therefore, that the effects of civilization will be recorded, but in the solicitude with which concrete details are expressed. There is a connexion between the degree of civilization and the concrete character of the mental categories.

[1] **LXXXVIII**, p. 157.

But the fact that this advance of language toward abstraction is linked with the development of civilization suggests how the preceding examples may be interpreted. We know very well that a language is the reflection of human consciousness, and betrays the nature of the mind which conceives it. The mind of a cultured person, however, is more capable of perceiving the abstract than the mind of primitive man, because the conditions of civilized life turn the mind towards abstract considerations rather than to concrete ones. Trade presupposes calculation, that is to say, reasoning ; the development of political life favours the habit and taste for general ideas ; the exercise of thought itself is naturally brought about by a consideration of the concrete in terms of the abstract. We can estimate the difference between the powers of abstract thought in two mentalities by comparing ourselves with those around us. The illiterate peasant speaking French is very nearly in the position of an uncivilized being with nothing but French in which to express himself ; for his particular mentality, it is a very defective instrument. And he does not fail to correct it so as to accommodate it to his use. He twists it inside out to avoid abstract expressions and bends it to concrete expression, which alone concerns him. For example, he introduces onomatopœic words into it, and interjections ; he supplies what is lacking in the way of concrete categories by vocabulary, and destroys everything that is formal and logical in the French sentence by disarticulating and dislocating it.

There is nothing astonishing in the fact that the language of savages abounds in concrete terms whose variety and precision overwhelm us. This is true of all rural tongues. It has been observed in Lithuanian, where one tale can be related in a series of onomatopes.[1] The same may be observed in any country patois. Compare some story in a genuine rural patois with the discourse of any French political writer of the eighteenth century brought up in the school of logic. The first abounds in concrete ideas ; it is disjointed, abrupt, illogical, but nevertheless very expressive ; the other progresses by a succession of abstract and general formulæ, linked together in order like the terms of a syllogism. They are two different

[1] Cf. Leskien, *Schallnachahmungen und Schallverba im Litauischen*, **XXX**, vol. xiii, p. 167.

types of language representing two different types of thought. Let us not flatter ourselves that even our highly elaborated languages are completely void of mysticism. They are only so in appearance. The mystical element lies not in the language, but in the thought. Or rather, when it is found in language, it is because it was already present in the thought. It is not necessary to probe very deep beneath the surface of the language of illiterate folk anywhere in order to see the mystical appear, as in its proper element. The power of the name, the creation of onomastic legends, the use of formulæ and spells, the verbal taboos in our country folk-lore; are these anything but the natural fruit of an uncivilized mentality cropping up in the language of a civilized people?

Still, if we can imagine a political or social cataclysm overthrowing the present barriers which divide human groups, flinging into one whirlpool the representatives of different classes, nationalities, and races, destroying even our time-honoured civilization in order to clear the way for a new civilization, to be established upon another foundation, would not language be the first thing to suffer? Would not this mystical and concrete mentality, which has been almost eliminated from the great common languages, become sufficiently powerful again to recreate them in its own image and impose its own habits of thought upon them? What would French or English become in that case? Nothing more nor less than an uncivilized tongue. They would travel over again, in the reverse direction, the road by which they came to their present state. They would pass from the expression of the abstract to that of the concrete; and would be full of mystical and subjective categories. Would this be progress or decadence? Neither—at least if we treat the matter from the linguistic point of view. We need not consider the purely relative advantages or inconveniences of a change of civilization or even of a return to the state known as barbarism. We have no right to consider a rational and abstract language, because it happens to be our own, as in any way superior to a mystical and concrete one. It is entirely a question of two different types of mentality, each of which may have its merits. There is nothing to prove that, in the eyes of an inhabitant of Sirius, the civilized person's mentality does not represent degeneration.

We can now see how the hypothesis of progress in language must be understood. Progress in the absolute sense is impossible, just as it is in morality or politics. It is simply that different states exist, succeeding each other, each dominated by certain general laws imposed by the equilibrium of the forces with which they are confronted. So is it with language. In the history of languages a certain relative progress can be observed. Languages may be adapted in a greater or lesser degree to certain states of civilization. Progress consists in the best possible adaptation of a language to the needs of the people using it. But, however real this progress may be, it is never definitive. The characteristics of a language are maintained just so long as the people speaking it preserve the same habits of thought; and they are liable to modification and degeneration, or to complete disappearance. It is quite wrong to think of language as an ideal entity evolving independently of men and pursuing its own ends. Language does not exist apart from the people who think and speak it; its roots go deep into the consciousness of each one of us; thence it is that it draws the sustenance enabling it to blossom in speech. But personal consciousness is only one of the elements of the collective consciousness whose laws are imposed upon every individual. The evolution of language thus constitutes only one aspect of the evolution of society: we should not see in it anything in the nature of direct advance toward a definite goal. The task of the philologist comes to an end when he has recognized in language the play of social forces and the influence of history.

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APPENDIX

ANY book on language published in 1914 needs to be revised more than once before it can be in keeping with the scientific thought of 1924. By a coincidence which we do not owe entirely to chance, language-study in general during these last ten years has been the subject of a variety of works whose equivalent in number and quality had never been known before.

De Saussure's *Cours de linguistique générale*, published in 1916 (2nd edition, 1922), was not available for use until after the last revision of the present work, in which it has served merely as the subject of one or two references in the footnotes. It contains some profound and original views from which several chapters might have derived benefit.

The present work was already printed when Meillet published his *Linguistique historique et linguistique générale*, a collection of articles which by their mere juxtaposition constitute a comprehensive and harmonious body of doctrine. Most of these articles had, however, appeared elsewhere, so they had already been utilized and quoted above with references to the original publications. Marouzeau's little book, *La Linguistique ou science de langage*, published about the same time, dealt in a clear and simple form with some of the problems studied by linguists, and placed them within reach of the public.

Two works of first-rate importance, one by Sapir [1] and the other by Jespersen,[2] both bearing the title *Language*, have appeared since the present volume was printed. The author would have been glad to have benefited by them in order to enrich and adorn several arguments of his own. He would also have profited by Trombetti's *Elementi di glottologia* (two vols. Bologna, 1922), in which a personal theory as to the evolution of language is supported by an almost universal erudition in linguistic matters.

In their judicious selection of extracts from the enormous bulk of their master's writings, various disciples of Schuchardt

[1] *Language; an Introduction to the Study of Speech.* London and New York, 1921.

[2] *Language: its Nature, Development and Origin.* London, 1922.

have provided a little manual of general linguistics full of substantial and attractive information. This *Hugo Schuchardt-Brevier* (Halle, 1922) is undoubtedly, in the words of the sub-title, " ein Vademekum der allegemeinen Sprachwissenschaft."

While confining himself to French ground, Brunot, in *La pensée et la langue* (Paris, 1922), also makes general linguistics his theme. He applies a new method to the study of the facts of language, classifying them according to the ideas expressed. His criticism of the old traditional divisions is in agreement with some of the observations made above in our chapter on grammatical categories.

A number of suggestions which are well worth bearing in mind can be obtained from Millardet's book *Linguistique et dialectologie romanes* (Montpellier and Paris, 1923), wherein some fundamental questions of linguistic methodology are boldly confronted and discussed in a lively manner.

Finally, there is the recently published *Festschrift Wilhelm Streitberg*, which offers, as is indicated by the sub-title, an exposition of the present state of language-study and of the work which has yet to be tackled. The first chapter, written by Junker, provides a good summary of the ideas current in Germany with reference to general linguistics.

It is by no means essential for the reader to concern himself with these various works ; even when the ideas which they contain are similar to those elaborated here, they are written from a different point of view and with quite another sense of values and proportions ; so far as details are concerned, each contains a number of new examples which could have been advantageously introduced above or substituted for those we have given. None of them, however, seems to require any modification of the general plan of the present work. This proves that the science of language has reached a point at which every general synthesis must be conceived in the same way. One part only may, perhaps, require altering, namely the first, which is devoted to sounds and which was based on a system that may appear to be out of date. Grammont's work on *Assimilation* (Paris, Champion, 1924), a prelude to his expected treatise on general phonetics, enables us to envisage a simpler and also a more scientific method of grouping facts.

The original design of the book would have involved a sixth chapter at the end of the fourth part, dealing with the

distribution of language-families throughout the world. For certain practical reasons this chapter was abandoned, but the idea, which would only have been presented as a mere sketch, has now been fully realized in the book entitled *Les Langues du monde* (Champion) by a group of linguists under the direction of Messrs. Meillet and Cohen. The dimensions attained by this vast survey have justified our decision to leave the question out of the present volume.

The interest in his book manifested by several philosophers would seem to be an invitation to the author to express his general ideas in clearer outline, to emphasize his doctrine further, and above all, to bring it in line with the progress of psychological science. A work by Delacroix (*le Language et la Pensée*, Paris, 1924), which will appear while these pages are being printed, will render such a desire futile. All linguists will welcome the aid of this specialist in a kindred subject.

Furthermore, in 1923, the German philosopher, Cassirer, published a book entitled *Philosophie der symbolischen Formen, Part I, Die Sprachen*, in which he touched on some essential points in general linguistics.

* * *

Had circumstances allowed him to produce a new edition of his book, and not merely a reprint, the author would have been obliged to introduce numerous corrections and additions. He has found some extremely useful suggestions in the very friendly reviews which have been devoted to his work, notably by Messrs. Grammont, Niedermann, L. Clédat, Viggo Bröndal, A. Dauzat, and G. Esnault. Several colleagues and friends, Messrs. Lalande, Marcou, Mayer, Lambert, Am. Castro, and J. Jud, have sent him notes and observations, foi which he is greatly obliged. The Bibliography, moreover, has become much more extensive during the last ten years. In the following list only the principal modifications are mentioned, which might with advantage be made in the text, together with the most important bibliographical references.

P. 5, n. 1. Add: V. Henry, **LXXXIII,** and F. Ribezzo, *Eco della Cultura*, Naples, f. xv (1916).

P. 11, n. 2. Add: G. Ballett, *Le langage intérieur et les diverses formes de l'aphasie*, Paris, 1888; Foix in Sergent's *Traité de pathologie mentale*, Vol. V: Déjerine, *Sémiologie*; Gilbert and Thoinot, *Traité de médecine*, Vol. XXXI, Sémiologie nerveuse, the chapter on aphasia.

P. 13. On prehistoric anthropology, see now Boule's admirable book *L'homme fossile, éléments de paléontologie humaine*, Paris, 1920 (English Translation, 1924).

P. 14, n. 1. Add : Fred Newton Scott, *The genesis of Speech* (Publications of the Modern Language Association of America, Vol. XXIII, 4, 1908, pp. 1–29).

P. 25, l. 1. Read : dentals (French *s* and English *th* in *thank* or *thick*, with a different position for the tip of the tongue).

P. 38, l. 4. Add : it has also been noticed in the Bantu group of languages.

P. 48, l. 8. Add : in the Aberdeen district (Scotland) *f* is pronounced instead of *wh* (Grant and Dixon, *Manual of Modern Scots*, Cambridge, 1921, p. 32).

P. 49, l. 38. Add : see Suetonius, *Vesp.* VIII, 22.

P. 56, n. 1. Add : and p. 172, 5 ; cf. Vondrak, **CCXVII**, 1, p. 243.

P. 57, n. 2. Add : Psichari, Vol. V, p. 349.

P. 73. On all questions discussed in Part II, see now Jespersen's *Philosophy of Grammar* (London, 1924).

P. 90, n. 1. Add : H. J. Pos, *Zur Logik der Sprachwissenschaft*, Heidelberg, 1922.

P. 95, n. 1. Add : Meillet, *Linguist. hist. et linguist. génér.*, p. 211.

P. 96, l. 10. For the distinction between the animate and inanimate object in Spanish and Roumanian, see Bourciez, *Eléments de linguistique romane*, 2nd ed., 1923, §§ 236*a*, 381, 499*a*, and 531, and Millardet, *Linguistique et dialectologie romanes*, p. 451.

P. 109, l. 4. Cf. Kr. Sandfeld-Jensen, *der Schwund des Infinitivs im rumanischen und den Balkensprachen* (Rumânske Studier, Vol. I, 1902).

P. 122, l. 3. Add : Hence the error of Pascal, who argues that it is possible to define being, on the ground that every definition of this word would necessarily begin with " it is . . . "—which is begging the question (*De l'esprit géométrique*).

P. 131, l. 3 from bottom. For analogous facts in Russian, see Boyer and Spersnski, **LIII**, p. 16, n. 5.

P. 137, n. 1. As regards active language, see Wegener, *Der Wortsatz*, **XXX**, Vol. XXXIX, p. 1–25.

P. 137, n. 1. Add : Leo Spitzer, *Aufsätze zur romanischen Syntax und stylistik*, Halle, 1918.

P. 142, n. 2. Add : Marouzeau, *L'ordre des mots en latin* I, *Les formes nominales*, Paris, 1922.

P. 150, l. 18. Cf. H. Paul, **CXXXVIII**, p. 285 ff.

P. 156. On Analogy as a conservative principal, see F. de Saussure, **CXXI**, p. 242.

P. 159. On the opposition between grammar and lexicography, that is between the deliberate and the arbitrary, F. de Saussure, **CXXI**, p. 187.

P. 182, n. 2. The word is Max Müller's. N. 3, add : Erdmann, **CLVII**, p. 107.

P. 183, l. 12. See Court de Gébelin, *Le monde primitif analysé et comparé avec le monde moderne, considéré dans l'histoire naturelle de la parole, ou Origine du langage et de l'écriture avec une réponse à une critique anonyme*, Paris, 1775.

P. 201, n. 3. Add : Meillet, *Linguistique historique et linguistique générale*, p. 244.

Pp. 206, 207. Other examples will be found in Dottin, *Quelques faits de sémantique dans les parlers du Bas-Maine* (Mélanges Wilmotte, Paris, 1909).

P. 209. On the difference between French and German with regard to conversation, see some subtle observations by Mme. de Staël, *De l'Allemagne*, Part I, Chap. XII.

P. 213. Add in note: Brunot, **LVII**, Vol. I, p. 131, and Meillet, *Linguist. hist. et linguist. gén.*, p. 264. The whole chapter should be reconsidered in the light of Gilliéron's ideas (*Généalogie des mots qui ont désigné l'abeille*, Paris, 1918; *La faillite de l'étymologie phonétique*, Neuveville, 1919; *Les étymologies des étymologistes et celles du peuple*, Paris, 1922).

P. 220, last paragraph. Cf. Erdmann, **CLVII**, p. 114.

P. 225, last paragraph. Cf. Leo Spitzer, *Ueber einige wörter der Liebessprache*, Leipzig, 1918.

P. 226. The influence of hunting-terms is also deserving of mention: cf. Nicolas Edgar, *Les expressions figurées d'origine cynégétique en français*, Upsala, 1906.

P. 244. On the conditions of a universal common language, see especially Meillet, *Les langes dans l'Europe nouvelle*, Paris, 1918.

P. 245. On linguistic geography, consult Dauzat's excellent little book bearing this title (Paris, 1922).

P. 249. On the poetical language of the Middle Ages, see Gertrud Wacker, *Dialekt und Schriftsprache im Altfranzösischen* (Beiträge zur Geschichte der romanischen Sprachen und Literaturen, no. 11, Halle, 1916).

Pp. 250–1. On slang, consult Esnault's articles in the *Revue de philologie française et de littérature*, Vols. XXVII, XXVIII, and XXXV, and his book *Le poilu tel qu'il se parle*, Paris, 1919.

P. 253. The slang of German students is full of dialect words (cf. Kluge, *Studentensprache*, p. 65).

Pp. 254–5. Chéron (*Bulletin de l'école française d'extrême-Orient*, V, 47) mentions special languages used in Tonkin by dealers in pigs or seeds, sampan-boatmen, and singing girls; these are all bastard forms of Annamese.

P. 264, n. 1. Add: Navarro Tomas, *Manual de prononciatiòn española*, Madrid, 1918, and J. J. Nunes, *Compendio de grammatica historica portuguesa*, Lisbon, 1919.

P. 266, n. 3. Add: F. Kluge, *Deutsche Sprachgeschichte, Werden und Wachsen unserer Muttersprache von ihren Anfängen bis zur Gegenwart*, Leipzig, 1920.

P. 269. On the relations between English and Scottish dialects and normal English, see W. Grant and J. M. Dixon, *Manual of Modern Scots* (Cambridge, 1921). On the question of languages in Norway, see Ragnua, dIverson, *Bokmaal og Talemaal i Norge* (1560–1630), Kristiana, 1921, and especially A. Burgun, *Le développement linguistique en Norvège depuis* 1814, Kristiana, 1919–21.

P. 270, n. 1. Add: M. G. Bartoli, *alle fonti del Neolatino (estratto dalla miscellanea di studi in onore di Attilio Hortis)*, Trieste, 1910.

P. 280, n. 1. Add: G. Hempl, "Language Rivalry and Speech Differentiation in the Case of Race-mixture" (*Transactions of the American Philological Association*, Vol. XXXIX, 1898); and consult Marr's works and his "japhetic" theory which assumes the existence of several mixed languages (*Recueil Japhétique*, Petrograd, 1922-3; *Japhetitische Studien zur Sprache und Kultur Eurasiens*, Leipzig, Berlin).

P. 283. At Bourcet (= New Hengstett) and Pinaché-Serres, in Württemberg, we still find groups of the population speaking Provençal; cf. Morosi,

XLI, Vol. XI, p. 393, and Rössager, *Neu Hengstett* (*Birset*) *Geschichte und Sprache einer Waldenserkolonie in Württemberg*, Greifswald, 1883.

P. 295. On the Spanish language in the Marianne Islands, see an article by K. Wulff in the *Festschrift V. Thomsen*, 1912.

P. 323, 2nd paragraph. See the very curious development of the system of writing invented in our own time by Moya, King of the Bamoon in the Cameroons. (Delafosse, *Revue d'ethnographie et de traditions populaires*, 1922, No. 9.)

P. 325, n. 1. Add : Adolphe Cattaui Bey, *Champollion et le déchiffrement des hiéroglyphes*, Cairo, 1922 ; and especially Sottas and Driotton, *Introduction a l'étude des hiéroglyphes*, Paris, 1922.

P. 338, n. 2. Add : G. Paris, *Mélanges linguistiques*, Paris, 1906–9 (Appendix, *Histoire de l'orthographie française*).

P. 354, l. 18. Add : to denote the future (Mencken, *The American Language*, 2nd ed., New York and London, 1921, pp. 178–9). Add to n. 1 : Louvigny de Montigny, *La langue française au Canada*, Ottawa, 1916.

P. 356, n. 1. Add : Lévy-Bruhl, *La mentalité primitive*, Paris, 1922.

P. 362. E. Bourciez, *Eléments de linguistique romane*, 2nd edition, 1923.

P. 363. Densusianu, *Histoire de la langue roumaine*, Vol. I, Paris, 1901. Vol. II, Part I, Paris, 1914.

P. 366. K. O. Erdmann, *Die Bedeutung des Wortes*, 3rd edition, Leipzig, 1922. O. Hoffmann, *Geschichte der griechischen Sprache*, 2nd edition, 1916.

P. 427. W. Meyer-Lübke, *Einführung*, etc., 3rd edition, Heidelberg, 1920.

P. 428. O. Schrader, *Sprachvergleidung und Urgeschichte*, 3rd edition, 1907. A. Zauner, *Romanische Sprachwisscuschaft*, Part I, 4th edition, 1921 ; Part II, 3rd edition, 1914. Add also : O. Jespersen, *Nutidssprog hos boern og voxne*, Copenhagen, 1916.

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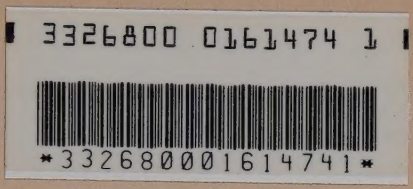

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